THE QUALITY OF KNOWLEDGE MANAGEMENT PRACTICES AND SUCCESS FACTORS IN MALAWIAN NON-GOVERNMENTAL ORGANISATIONS

by

ENNIE MAKOTA

submitted in accordance with the requirements
for the degree of

MASTER OF SCIENCE

in the subject

COMPUTING

at the

UNIVERSITY OF SOUTH AFRICA

SUPERVISOR: PROF. LEILA GOOSEN

2014

ABSTRACT

This study aims to identify the quality of knowledge management practices and success factors of non-governmental organisations in Malawi, and their influence on the knowledge management process.

A questionnaire-based survey is used to establish the knowledge management practices being implemented and the extent to which they are being followed through on. A statistical-based analysis enabled the researcher to determine the influence of these practices on knowledge management processes.

Results suggest an unbalanced pursuit of knowledge management practices in Malawian non-governmental organisations, which are oriented towards the knowledge generation process but fall short in knowledge application activities.

This study contributes to strategy formulation and decision making in respect of adopting and investing in knowledge management initiatives in the non-profit sector. More importantly, it joins the debate on identification of appropriate practices which effectively address organisational needs.

Data is limited to non-governmental organisations in Malawi; therefore, findings may be tied to a specific geographical location.

Keywords: Knowledge management; non-governmental organisations; knowledge management processes; knowledge management practices; success factors; Malawi.

ACKNOWLEDGEMENTS

Special thanks to my supervisor, Prof. Leila Goosen, for her support and guidance throughout the research. This research would not have been, without your wisdom and expertise. THANK YOU. Not forgetting my husband, Rennie Chikwanha, for working tirelessly to make this a success. You are the best!

To my two angels, Kayla and Ethan, I was not always there for you because of this project, but thank you for your patience and understanding. I love you.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ACRONYMS AND ABBREVIATIONS

CONGOMA – Council for Non-Governmental Organisations in Malawi

FAO – Food and Agriculture Organization of the United Nations

IFAD – International Fund for Agricultural Development

IT – Information Technology

NGO – Non-governmental organisation

UN – United Nations

CHAPTER 1: INTRODUCTION

Organisations are becoming increasingly aware of the need to manage their cognitive and intangible assets; therefore, they are progressively dedicating resources to knowledge management efforts. These efforts "typically focus on organisational objectives such as improved performance, competitive advantage, innovation, sharing of lessons learned, integration and continuous improvement of the organisation" (Elena, 2010:1).

Although some limitations may need to be overcome within the knowledge management discipline (Firestone & McElroy, 2003:12), it is expected that the focus on knowledge management will continue to evolve to maturity in the future. While such knowledge has increasingly been regarded as a core capability or competency of an organisation, organisations are compelled to adapt or risk being perceived as irrelevant (Schwartz, 2006:234; Zaied, Hussein & Hassan, 2012:27). This observation builds confidence in the belief that knowledge management is not just a trend, but a long-lasting phenomenon, which modern organisations need to implement as an integral part of their business-as-usual practices.

Research trends have shown that the focus of knowledge management research is shifting from knowledge management creation, transformation and implementation to the evaluation of knowledge management contributions to the overall performance of an organisation (Moballeghi & Galyani Moghaddam, 2011:318). Organisations do not only need to implement strategies which incorporate knowledge management but also knowledge management evaluation strategies that influence improvement of business performance (Carrillo, Robinson, Anumba & Al-Ghassani, 2003:10).

Since non-governmental organisations (NGOs) have been adopting knowledge management practices as part of the strategy to meet the expectations of donors and beneficiaries (Hume, Clark & Hume, 2012:82), the need arises to crystallise the relationship between the quality of increasingly adopted knowledge management practices and the knowledge management processes in NGOs.

Although NGOs have been viewed as lagging behind their for-profit counterparts (Renshaw & Krishnaswamy, 2009:462), they are also slowly integrating knowledge management practices into their operations, as they discern that knowledge management is likely to remain pertinent in the long term. While extensive research has been conducted on knowledge management within the private sector, few studies have detailed the impact of the quality of knowledge management practices and success factors within NGOs. To address this shortcoming, this study assesses the quality of knowledge management practices and success factors within Malawian NGOs.

1.1 Background and need

According to Mostashari (2005:2), the term "non-governmental organisation" or NGO was introduced in 1945, to differentiate between the participation rights of intergovernmental specialised agencies and those of international private organisations.

NGOs have become the favoured service providers in countries where governments are unable to fulfil their roles: "An enhanced role for NGOs in service provisioning has often been justified on the grounds that they are perceived to be more participatory, less bureaucratic, more flexible, and more cost-effective, with an ability to reach the poor and disadvantaged people more effectively than the government" (Oertel, Gebre, Kourouma & Said, 2004:25). In Malawi, NGOs are recognised as being better placed to articulate the needs of communities, and therefore constitute an important element in the policy formulation process. As such, NGOs continue to work as partners with governments, and not as competitors.

As social and humanitarian needs continue to grow, it is doubtful that available resources will increase at the same rate. As a result, competition has intensified among NGOs, leading to self-examination and soul-searching questions about their future role and effectiveness. Consequently, NGOs experiment with a range of strategies to be innovative, reduce administrative costs and to focus resources more on the needs of people. In this way, they remain effective and are able to increase the impact of their development work (Edwards & Hulme, 1992:44). Accountability

issues also come into play: NGOs have been criticised for spending more time trying to please and meet the requirements of donors and governments than those of the intended beneficiaries of their programmes (Lewis & Kanji, 2009:28; Banks & Hulme, 2012:31). Is a balance between these issues possible?

Consequently, NGOs have put in place various strategies to enhance and improve their programmes and activities: "since knowledge management has been found to be very useful for enhancing organisational performance, NGOs also attempt to adopt knowledge management practices as a new dimension to their organisational development process" (Safa, Shakir & Boon, 2006:70). It is conspicuous that knowledge management has become a key strategy for for-profit organisations to maintain a competitive edge and it could be a powerful tool that opens exciting opportunities for NGOs to achieve their goals effectively.

Moreover, knowledge management is recognised to be an important driver of organisational performance. As such, organisations including NGOs have increasingly integrated knowledge management practices into their businesses. These practices have proven to be useful in the for-profit sector but their influence on the non-profit sector is yet to be seen. It is therefore essential to evaluate the contributions of knowledge management practices to the knowledge management process and ultimately, the performance of NGOs.

Research has suggested that organisational context and working environment have an impact on knowledge management behaviours (Detlor, Ruhi, Turel, Bergeron, Wei Choo, Heaton & Paquette, 2006:125). NGOs have different operational methodologies compared to their for-profit counterparts, since their goal is to create social value and provide services to the underprivileged, rather than generate profits. Their services are knowledge intensive and they are largely dependent on donors (Cardoso, Meireles & Peralta, 2012:268). Therefore, although the private sector has been seen to derive some benefits from knowledge management practices, strategies used by for-profit organisations may not work for NGOs, since there are considerable differences between the two. Recent research by Corfield, Paton and Little (2013:187) supports this observation, further cautioning that implementing knowledge

management requires appropriate selection of knowledge management practices so that they address specific organisational challenges.

1.2 Purpose of the study and problem statement

The purpose of this research is to examine the quality of knowledge management practices and success factors in Malawian NGOs. The research does not only establish which knowledge management practices are being implemented by NGOs in Malawi, but also to what extent they are implemented. Their influence on the knowledge management process and possible links among the various knowledge management success factors are also examined.

The need for this research emanates from the observation that although knowledge management has become important to organisations outside of the private sector (Keeney, 2012:171), current literature on knowledge management practices tends to focus more on for-profit organisations than on NGOs. Therefore, whilst knowledge management integration has been seen to work in the for-profit sector, it is vital to explore the knowledge management practices existing in NGOs and the extent to which they contribute to their performance.

Research by the World Bank has suggested that evidence of the impact of knowledge sharing on development is still very limited. The research points out that, it is yet to be convincingly shown how "knowledge sharing makes lives better for the poor in developing countries who are the supposed beneficiaries of development assistance" (King & McGrath, 2003:16). Given the above, there is need to evaluate if knowledge management practices can in any way improve projects and programmes that benefit the underprivileged.

Though recent research has found a positive correlation between knowledge management capabilities and organisational performance, there is need to examine how knowledge management practices impact performance through catalysing and accelerating the knowledge management process (Andreeva & Kianto, 2012:632). Therefore, further examination into the links between knowledge management practices and the knowledge management process is vital. This research will thus seek

to establish the quality of knowledge management practices and success factors in Malawian NGOs and examines how these practices influence the knowledge management process.

1.3 Research goal and objectives

The goal of this research is to assess the quality of knowledge management practices and success factors in Malawian NGOs. In order to reach this goal, the following objectives were set:

i. Establishing which knowledge management practices are being implemented in Malawian NGOs and to what extent.
ii. Determining the influence of these practices on knowledge management processes.
iii. Ascertaining the relationships among different knowledge management success factors.

The main research question to be addressed is: *"What is the quality of knowledge management practices and success factors in Malawian NGOs?"*
In order to answer the main question, the following sub-questions were formulated:

1. Which knowledge management practices are being implemented by NGOs in Malawi and to what extent?
2. What influence do these practices have on the knowledge management process?
3. What are the relationships among the knowledge management success factors?

1.4 Significance of the study

The research provides insight into the quality of knowledge management practices and success factors in Malawian NGOs. Every organisation that harbours knowledge management ambitions expects concrete benefits, but these results are not guaranteed. The burning question is: Is the value created by knowledge management practices comparable to the value demanded by the constantly changing operating environments of NGOs? The non-profit sector lives with a blurry cognisance of the influence of knowledge management practices on the knowledge management process and, ultimately, the performance of their organisations (Lettieri, Borga & Savoldelli,

2004:29). The research therefore explicates the quality of knowledge management practices and success factors in Malawian NGOs, and their influence on the knowledge management process; in the process laying bare the possible adverse results, which can come about especially due to the organisation's structure and working methodologies.

This piece of work also contributes to the strategy formulation and decision making in respect of adopting and investing in knowledge management initiatives in the non-profit sector. More importantly, it contributes to the identification of appropriate practices that effectively address the needs of these organisations. It will also be useful to the NGOs' management and practitioners to see the practices which best boost their performance. This study will add value to NGOs pursuing the integration of knowledge management perspectives in their operations, guiding them to adopt appropriate knowledge management strategies and more so identifying practices which effectively address their challenges. Additionally, the research will add to the existing body of literature, forming a basis for further research.

The empirical study will help to examine the knowledge management practices being implemented in Malawian NGOs and to determine the influence of these practices on the knowledge management process.

The research was also done in fulfilment of the requirements of the MSc Computing degree.

1.5 Assumptions, limitations and delineations

- Since participation was voluntary, while anonymity and confidentiality were guaranteed, the researcher assumed that respondents gave truthful responses, which facilitated reasonable inferences and deductions. All the data collected was assumed accurate and free from bias.
- It was also assumed that the sample used sufficiently represented all the NGOs in Malawi, considering that the sample was drawn from a platform where all NGOs operating in Malawi are registered.

- The researcher assumes that reality is singular and objective, and can be separated from the researcher.
- The time limitation necessitated the study to be conducted over a certain interval of time, hence findings may be a snapshot, dependent on conditions occurring during that time.
- This study will be restricted to NGOs in Malawi; therefore findings may be tied to a specific geographical location.

1.6 Definition of terms

Taken literally, NGOs refer to organisations that are not a part of the government (Werker & Ahmed, 2008:73). Although this may include some for-profit firms, this study will restrict the term to organisations that pursue social and humanitarian activities, with goals that are primarily non-commercial. Thus, they undertake activities to relieve suffering, promote the interests of the poor, protect the environment, provide basic social services, or undertake community development. These can either be operational NGOs, which are primarily concerned with development projects, or advocacy NGOs, which are primarily concerned with promoting a cause.

1.7 Chapter summary

The increasing demand for humanitarian, social and developmental services against the shrinking resources base urges NGOs to put in place strategies which enable them to make better use of the limited available resources. Managing of intellectual property has growingly become a popular strategy both in the for-profit and non-profit sectors. The question is not whether the non-profit sector should exploit knowledge management strategies – in fact, they are in the knowledge business whether they recognise it or not – but rather are they deriving any benefits from these practices? The challenge is to assess the quality of these practices, and how they are influencing the knowledge management process, ultimately bringing the intended value to the operations of NGOs.

While knowledge management and organisational performance have been discussed intensively in the literature from a for-profit oriented perspective, this research

considers knowledge management practices in NGOs and their possible contribution to the performance of these organisations. Issues of what knowledge management practices are being adopted by the NGOs, to what extent and how these practices influence the knowledge management process, will need to be looked at.

1.7.1 Chapter outline

- Chapter 2: Evaluation of literature on knowledge management practices in organisations and how these practices influence the knowledge management process and organisational performance. The research gap is then documented.
- Chapter 3: Introduction of research to quantify knowledge management practices being implemented and to what extent. The survey-based research will provide rich and insightful data to aid answering the outlined research questions.
- Chapter 4: Outline of the report on the research findings. This will include an outline of current research practices, successes and areas for improvement.
- Chapter 5: Finally, a discussion of lessons learnt from the implementation of knowledge management practices in the non-profit sector is put forward. The significance of the observations of knowledge management practices being implemented and their influence on the knowledge management process are discussed.
- Chapter 6: Conclusions are reached; recommendations and opportunities for future research are suggested.

CHAPTER 2: REVIEW OF THE LITERATURE

2.1 Introduction

Interest in knowledge management initiatives has increased beyond the business sector, with other sectors such as NGOs also beginning to realise the potential of adopting knowledge management practices in their organisations. However, there has been limited research evaluating the impact of knowledge management practices in NGOs, therefore there are still unanswered questions about which strategies are most effective in this particular sector.

Although there is a large body of literature on knowledge management practices in general, this section focuses on reviewing literature on how the business sector is benefiting from embedding knowledge management concepts in their businesses and how lessons from the business sector can be applied within NGOs. The trends in the adoption of knowledge management in NGOs are also assessed and the quality of knowledge management practices and success factors are examined.

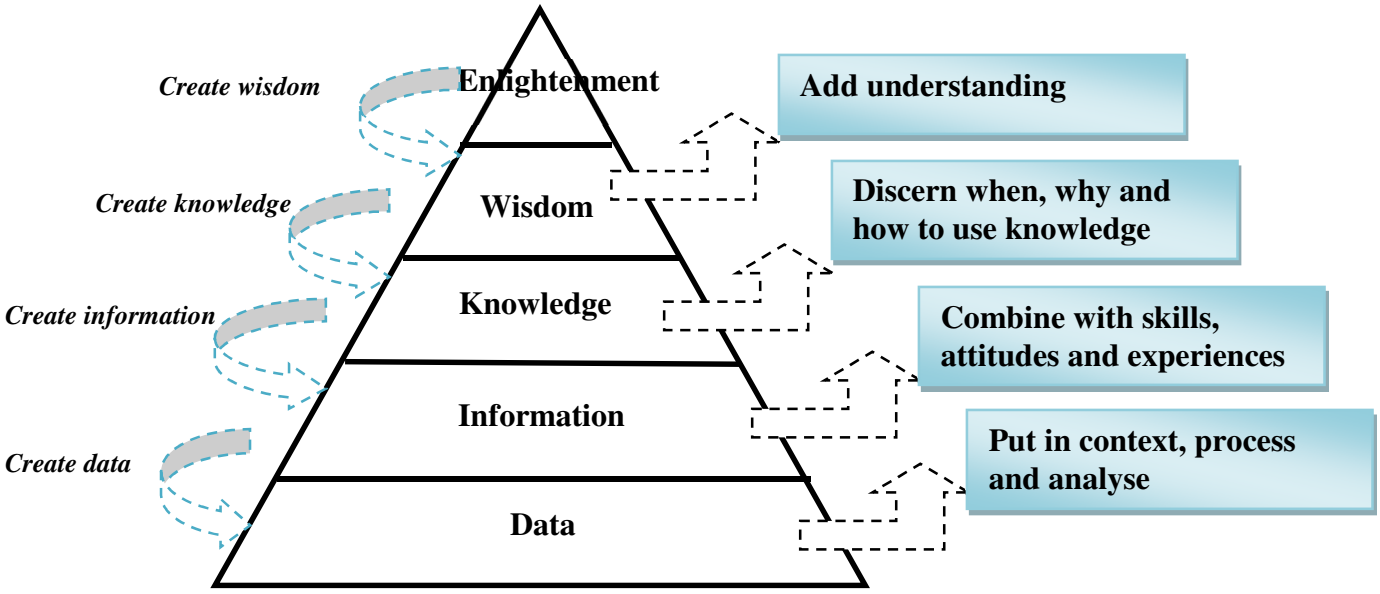
2.2 Defining knowledge and knowledge management

Over the years knowledge management has been defined so broadly that anything can be incorporated. Some definitions make a distinction between knowledge management and information management while others do not. However the fact still remains that knowledge management deals with both knowledge and information.

2.2.1 Knowledge

Different researchers define knowledge differently, with experts in knowledge management, such as Rowley (2007:170) and Zins (2007:488) speaking of a knowledge hierarchy that represents functional relationships between data, information, knowledge and wisdom. The common observation is that most of these definitions acknowledge that knowledge goes further than data and information. Anand and Singh (2011:932) further extended the pyramid to include enlightenment as shown in Figure 2.1.

Figure 2.1: The extended knowledge hierarchy



Adapted from: Anand and Singh (2011:932)[1]

At the base of the pyramid is data, the actual facts and figures, which when put in context, processed and analysed becomes information (Anand & Singh, 2011:931). Information only becomes knowledge when it is combined with skills, attitudes and experiences. Wisdom is knowing when, why and how to use knowledge, thus it comes after the knowledge has been applied and reflected upon (Thierauf & Hoctor, 2006:5). Finally enlightenment, which Anand and Singh (2011:932) define as the highest form of understanding, is at the top of the pyramid.

Some researchers argue that the knowledge pyramid is not truly representative of the relationship between these entities because it presents a picture that each level is filtered when moving to the next (Frické, 2009:134). However, it can be a very useful tool in conceptualising the functional relationships between the entities, where each level builds upon what comes before it. Thus data helps build information, which helps build knowledge, which helps build wisdom. Nevertheless, the possibility of a reverse relationship cannot be ruled out, thus the argument that diffusion should be

[1] The knowledge hierarchy from Anand and Singh (2011:932) was extended to show the processes that take place to move from one level to another. In addition, the possibility of a two-way relationship was incorporated into the figure.

permissible in both ways, where knowledge is needed to create information, which in turn is needed to create data (Anand & Singh, 2011:932; Williams, 2006:83).

2.2.2 Types of knowledge

Knowledge can be divided into two groups, mainly tacit and explicit knowledge. In the past decade, Smith (2001:311–321) gave an insightful discussion on practical ways to acquire and use knowledge while balancing the use of tacit and explicit knowledge within an organisation. He defined tacit knowledge as "practical, action-oriented knowledge or 'know-how' based on practice, acquired by personal experience, seldom expressed openly, often resembles intuition" (Smith, 2001:314). While this type of knowledge comes in the form of expertise – exhibiting the ability to adapt and deal with new and exceptional situations – it is difficult to articulate and put into words. It resides in the head of the knower and it is less quantifiable (Dalkir, 2005:8).

Tacit knowledge can be very functional in organisations as it allows creative, flexible, unchartered and divergent ways of thinking. It develops insights, which can be useful in responding to a changing, unpredictable environment (Smith, 2001:314).

On the other hand, explicit knowledge, which is defined by Smith (2001:314) as "academic knowledge or 'know-what' that is described in formal language, print or electronic media, often based on established work processes, use people-to-documents approach" is usually contained within tangible media. It exhibits the ability to disseminate, reproduce, access and re-apply throughout the organisation (Dalkir, 2005:8). Explicit knowledge can be useful in organisations as it enables routine and organised tasks to be performed, assuming a predictable environment. This enables the organisation to meet set goals and objectives (Smith, 2001:314).

Tacit knowledge is more often captured by softer systems such as shadowing, mentoring, instant messaging and intranet forums. Specific actions such as after action reviews and post-implementation reviews after a project or significant events can also be effective in capturing tacit knowledge. On the other hand, technology-based knowledge management systems are suitable for capturing explicit knowledge.

2.2.3 Knowledge management

The multidisciplinary nature of the knowledge management field influences the diversity of knowledge management definitions. Knowledge management draws from a wide range of diverse disciplines and it consists of a collection of concepts borrowed from different fields such as sociology, economics, anthropology, computer science, information systems, strategic management and many others. For instance, knowledge management in the information systems discipline focuses on systems that support the identification and distribution of knowledge in organisations, while the strategic management discipline focuses on knowledge as an organisational resource of strategic significance (Jasimuddin, 2006:175).

It is evident that knowledge management continues to grow, bringing together and effectively integrating knowledge from a variety of different perspectives. Knowledge management is also interdisciplinary; as a result it can draw upon theories and practices from many disciplines.

There are many ways of looking at knowledge management and different organisations or researchers take different approaches. Although the emphasis may differ from one researcher to another, it is recognisable that knowledge management involves a spread of practices whose adoption may vary considerably between contexts.

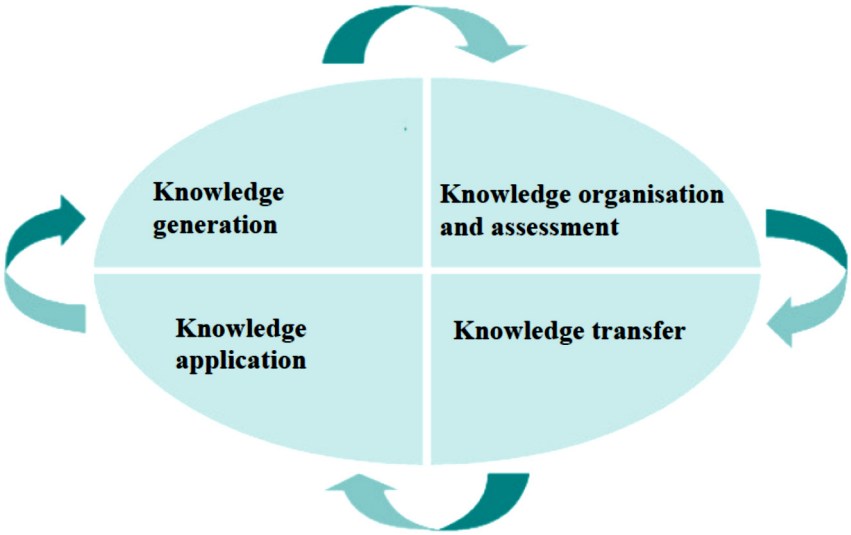
The most useful definition of knowledge management would tie together its various dimensions and also focus on the possible symbiosis between these perspectives (Jashapara, 2004:21). Considering the previous comprehensive review, this study adopts the following definition which views knowledge management as "the management perspective, and associated practical activity, intended to make the best use of the knowledge resources available to an organisation to meet its productive opportunities" (Corfield et al., 2013:181). This definition recognises that knowledge management is a dynamic process, in which some interactive activities and practices have to be adopted to effectively make use of available knowledge resources. These practices and activities are discussed in detail in the following sections.

2.3 The knowledge management process

Knowledge management processes outline all aspects involved in the creation, sharing and utilisation of knowledge resources across functional boundaries (Chang & Chuang, 2011:6171). These processes, according to the adopted definition of knowledge management, involve practical activities that are undertaken to make the best use of the organisation's knowledge resources in order to meet its productive opportunities. The activities facilitate the maintenance, storage and retrieval capabilities of organisational knowledge while creating an environment conducive to learning and knowledge sharing.

There are a wide range of aspects involved in the knowledge management process, such that different practitioners have adopted different approaches to the knowledge management processes. This research has grouped the processes into four categories, which are: knowledge generation, knowledge organisation and assessment, knowledge transfer and knowledge application as presented in Figure 2.2.

Figure 2.2: Knowledge management processes



2.3.1 Knowledge generation

Before knowledge can be effectively re-used or shared it must be properly recognised and categorised. The knowledge generation process includes all activities by which new knowledge is generated within an organisation such as discovery, detection, acquisition and creation of knowledge. Organisations need to consciously and

intentionally generate knowledge under specific activities and initiatives in order to increase the stock of knowledge in their possession and decipher patterns in the available information. Researchers argue that knowledge creation is a dynamic process of socialisation, explicit, combination and internalisation (Nonaka et al., 2000, as cited in Alwis & Hartmann, 2008:136). Organisations therefore require continuous creation of tacit and explicit knowledge through these interactions.

The ability of an organisation to create new knowledge is often pivotal to the organisation's competitive advantage, as it leads to diversity and innovation. Technology-based knowledge management systems effectively discover and capture explicit knowledge. In order to uncover hidden knowledge, organisations should harness the capabilities of the evolving information technology (IT) systems, such as data mining, to facilitate the unmasking of patterns and relationships from the rapidly-growing volumes of data. Activities such as sorting through records to discover knowledge within existing data and knowledge repositories are crucial.

On the other hand, tacit knowledge is often captured through the use of softer systems such as shadowing, mentoring, surveys and social forums. Groupware systems and other social and professional networks, as well as expert finders can help by pointing to the knowledge holders, and may also give an indication of the knowledge possessed. Although tacit knowledge is highly valuable, discovering it is a lot more complex. It is therefore vital for management to gain an understanding of the tacit knowledge within their reach and how they can tap into it.

Additionally, firms should examine and identify knowledge trapped inside organisational routines, processes and products. Discovery of embedded knowledge involves observation, analysis and the use of reverse engineering and modelling tools. Although embedded knowledge may exist in explicit sources like manuals, the knowledge itself is not explicit, and therefore managers will need to examine why doing something a certain way is beneficial to the organisation (Pasha & Pasha, 2012).

Furthermore, it is crucial for organisations to be cognizant of extra-organisational knowledge resources existing outside the organisation, which could be used to

enhance the performance of the organisation and tap into them. These include publications, alliances with other firms, investments in network ties, as well as tacit elements found in communities of practice that span beyond the organisation's borders. This type of knowledge, although very important, is often overlooked. Agile firms in the knowledge management sphere are strategically tapping into extra-organisational knowledge resources to expand their knowledge base (Easterby-Smith & Lyles, 2011). Such knowledge can be acquired from various external sources such as customers, suppliers, competitors and partners or alliances.

In conclusion, management has to make efforts to identify the valuable knowledge sources relevant to their organisations. This knowledge can then be combined with the organisation's knowledge assets to achieve synergy. The adoption of practices that make knowledge easier to detect is useful in discovering the knowledge that a firm possesses.

2.3.2 Knowledge organisation and assessment

The previous section discussed ways that organisations can use to expand their knowledge base. However, generated knowledge will not effectively benefit the organisation if it is not properly codified and stored in favour of the organisation's objectives and priorities (Zaim, Tatoglu & Zaim, 2007:56). The knowledge will also need to be protected and maintained.

In order to determine the resources at their disposal and to identify strengths and weaknesses, organisations need to systematically classify their knowledge assets into something manageable. The knowledge must be prepared in such a way that it can be identified, retrieved and understood by the knowledge user (Gholami, Asli, Nazari-Shirkouhi & Noruzy, 2013:208). Technical systems such as online knowledge searching systems and document management systems can be very useful in identifying knowledge, as well as classifying, mapping, coding, indexing and categorising it for easy navigation, storage and retrieval (Okumus, 2013:71).

Expertise locators, such as corporate yellow pages, expert networks and other knowledge maps can be used to determine the location and categorise the valuable expertise of tacit knowledge. They can also shed light onto how widespread certain

tacit knowledge is, enabling the firm to plan. In addition, workflow analyses and performance measures can be used to organise and assess embedded knowledge (Gamble & Blackwell, 2001:172). It also becomes key to examine the severity, criticality and availability of the knowledge.

Knowledge organisation and assessment may seem like an expensive endeavour, particularly since the return on investment is indirect, but it is a very essential step in the knowledge management process. Organisations ought to put systems in place that facilitate the detection and organisation of knowledge depending on the situation within which the knowledge was created and the possible recipients.

2.3.3 Knowledge transfer

After knowledge has been generated, assessed and organised, it will need to be disseminated throughout the organisation. Managers have an enormous role to play in creating a collaborative environment to enable effective transfer and sharing of both tacit and explicit knowledge (Pasha & Pasha, 2012). Similarly, a strong knowledge-sharing culture, with rich transmission channels and motivation to share knowledge are essential since sharing is largely determined by the habits of the knowledge holders and their willingness to seek out and/or be receptive to the knowledge sources.

It has been observed that successful sharing of knowledge largely depends on clear articulation of user needs, awareness of the available knowledge, access to the knowledge, guidance on the use of knowledge and completeness of the available knowledge (Pasha & Pasha, 2012). The charge is therefore placed upon managers to promote a culture that is conducive to knowledge sharing initiatives.

IT systems are very useful in the management of explicit knowledge; however, knowledge and content managers should remain instrumental in ensuring that the knowledge is relevant, up to date, and presented correctly. Explicit knowledge sharing is crucial for improving work processes and encouraging logical thinking (Smith, 2001:314)

On the other hand, sharing tacit knowledge requires socialisation on informal networks, which involves the day-to-day interaction between people within work environments (Smith, 2001:314). These networks need to be supported by providing the means for communication, such as social platforms where employees can engage in unstructured, unmonitored interactions. This is all summed up in a recommendation by Pasha and Pasha (2012) that "management must simply provide the means for employees to foster informal networks and trade tacit knowledge".

In order to effectively derive some benefits out of embedded knowledge, there is need to understand the knowledge that is locked in the organisational policies and procedures, and make it transferable into different systems. Thus the knowledge can be shared by incorporating knowledge from one product or process into another. Properly implemented IT systems can support practices and routines, eventually becoming embedded into the process.

2.3.4 Knowledge application

Unless knowledge generation is coupled with conversion and application, it remains ineffective. Acquired knowledge has to be applied to organisational functions and processes for organisational effectiveness; otherwise it is useless (Rahman, Imm Ng, Sambasivan & Wong, 2013:473). After knowledge has been generated, it will need to be assessed and organised in preparation for re-use. The knowledge will then be re-packaged to make it usable in a given context. Markus (2001:57–93) gives a penetrative analysis of some practical actions towards knowledge re-use, elucidating the re-use situations and factors in re-use success. According to Markus (2001:61) the process of packaging knowledge for re-use involves "culling, cleaning and polishing, structuring, formatting, and/or indexing documents against a classification scheme".

This packaged knowledge will then be used by other knowledge producers, practitioners who perform similar work in different settings, novices seeking expertise or people who want to apply the knowledge in different contexts (Markus, 2001:63). As can be seen, the users of the knowledge have different needs and therefore may encounter different challenges while trying to use the

knowledge repositories. It is therefore crucial for organisations to package their knowledge with the requirements of the users in mind.

However, as Markus (2001:79) points out, it's not just a matter of making the knowledge available; management has to play an active role in facilitating and encouraging the use of available knowledge. There has to be willingness among members to share, search, retrieve and re-use knowledge. If the packaged knowledge is not applied, it has no impact on organisational performance. Organisations must, therefore, exploit the knowledge available within their spheres, and make full use of it in order to maintain a competitive edge.

2.3.5 Summary

This section revealed the overall process of generating, organising and assessing, transferring and applying knowledge available in organisations. Table 2.1 summarises the knowledge management processes according to various authors, also indicating how these processes are connected to some knowledge management practices.

Recent research found out that the achievement of knowledge management objectives in organisations is largely dependent upon the importance attached to the generation, organisation and assessment, transfer and application of knowledge in the organisation (Khaksar, Yaghoobi, Jahanshahi & Nawaser, 2011:1076). Knowledge management processes can thus be stimulated or inhibited by particular knowledge management practices (Andreeva & Kianto, 2012:618). The adoption of practices that make each of these processes easier is crucial for the success of knowledge management initiatives in firms. NGOs must therefore strive for knowledge-based structures that positively influence the knowledge management processes in order to maintain a competitive advantage.

Table 2.1: Knowledge management processes

Category	Knowledge processes	Activities/Methods	References
Knowledge generation	Creation	Socialisation: sharing knowledge in face-to-face, natural and typically social interactions. Recombining discrete pieces of explicit knowledge into new concepts and form.	Fidalgo and Borges Gouveia (2012:4) Turner and Minonne (2010:164) Tseng (2010:273)
	Acquisition	Collecting knowledge, researching and experimenting.	Zaied et al. (2012:28) Raja Suzana (2010:220) Matzkin (2008:149)
	Capturing	Brainstorming, observing, interviewing, use of electronic meeting systems, training and educating.	Markus (2001:60) Turbigi (2012:6)
	Exploration and location	Intelligent searching.	Anand and Singh (2011:933)
	Documentation	Recording both organisational and individual knowledge.	Jennex and Olfman (2004:3)
	Gathering and accumulation	Learning appropriate knowledge from various internal and external resources such as experiences, experts, relevant documents, plans and so forth.	Gholami et al. (2013:206) Jashapara (2004:7) Mills and Smith (2011:160)
	Sourcing	Research partnerships and network collaborations.	Renshaw and Krishnaswamy (2009:459)
	Selection, identification and construction	Process and concept mapping.	Chang and Chuang (2011:6171)
Knowledge organisation and assessment	Storage	Use of technology to keep knowledge in accessible formats, maintaining and updating it.	Turbigi (2012:6) Chang and Chuang (2011:6171)
	Retrieval	Filtering and pruning content.	Gholami et al. (2013:206)
	Codification	Indexing and culling.	Jennex and Olfman (2004:3) Matzkin (2008:149)
	Protection	Use of technology systems to secure and keep knowledge safe from unauthorised personnel.	Khaksar et al. (2011:1072)
	Packaging and structuring	Representing knowledge in documents, databases, pictures, illustrations, spread sheets, on a disk, emails, video tapes and web pages to make it explicit, portable, accessible and usable.	Markus (2001:60) Tseng (2010:273) Mills and Smith, (2011:160)
	Conversion and transformation	Formalisation, consolidation and conversion into useful and applicable forms.	Zaied et al. (2012:28) Jashapara (2004:7) Raja Suzana (2010:220)

	Refining	Formatting, sanitising, cleaning and polishing.	Markus (2001:60)
	Classification and validation	Developing classification schemes.	Zaim et al. (2007:56) Anand and Singh (2011:933)
Knowledge transfer	Dissemination	Populating a repository for users to browse. Electronic alerts	Markus (2001:60) Tseng (2010:273)
	Distribution	Publishing newsletters.	Chang and Chuang (2011:6171)
	Diffusion and presentation	Guiding the intended users to use the knowledge or knowledge management tools in appropriate ways. Helping organisations understand the need to adopt newly-codified best practices.	Anand and Singh (2011:933) Matzkin (2008:149) Turbigi (2012:6)
	Sharing	Interactions between employees, brainstorming, convening “after action review" meetings and assessing knowledge re-use needs.	Zaim et al. (2007:57) Gholami et al. (2013:206) Jashapara (2004:7)
	Transmission	Facilitating the development of internal or external communities, dialectical thinking and continuous experimentation.	Raja Suzana (2010:220)
Knowledge application	Use and re-use	Applying the knowledge.	Zaied et al. (2012:28) Anand and Singh (2011:933) Mills and Smith (2011:160)
	Embodiment	Changing behaviour, practices, policies and processes.	Turbigi (2012:6) Zaim et al. (2007:57
	Exploitation	Identifying and recognising the appropriate expertise that meets the users' needs.	Jashapara (2004:7) Markus (2001:60)
	Assimilation and experimentation	Re-contextualisation: Analysis of general principles against a specific situation.	Gholami et al. (2013:206)
	Understanding	Recalling what knowledge has been stored, where and under what index or classification scheme.	Gholami et al. (2013:206)
	Implementation	Developing new ideas, practices, processes and policies.	Raja Suzana (2010:220)

2.4 Knowledge management implementation in the business sector

The growing trends of knowledge-based economies have seen innovative organisations using new technologies to introduce processes, which help them manage their knowledge assets. This transition from traditional production economy to a knowledge-based economy has forced all sectors of the economy, including those that are not seen as knowledge intensive, to shift their attention towards knowledge management. The dynamics of this knowledge-based economy, especially the evolving role of knowledge management across the spectrum of organisations, cannot be ignored.

Knowledge management can be used productively and profitably by businesses in several ways, with many possible and potential benefits. However not all of the benefits are realisable simultaneously through every knowledge initiative. Kothari, Hovanec, Hastie and Sibbald (2011:6) cite improvements in business processes, better coordination with counterparts and stakeholders and prevention of information loss due to staff retirements as important reasons for turning to knowledge management practices in the business sector. In most cases the benefits realised depend on the organisation's needs and strategy.

2.4.1 The influence of knowledge management practices in the business sector

The emergence of the knowledge-based economy forces organisations to deal with imminently unfolding issues such as complexities in products and processes, an increased relevant knowledge base both technical and non-technical, shorter product life cycles and increased focus on core competencies (Anand & Singh, 2011:936). Thus, organisations have to recognise that although knowledge management implementation is not uncomplicated, its influence in organisations at different levels – such as people, process, products and organisational performance – cannot be underestimated. It follows that management require a clear understanding of the value and benefits to be gained from effective knowledge management implementation, in order to be motivated for its execution.

The benefits of knowledge management initiatives are summarised in Table 2.2. It is evident that the strategic embracing of knowledge management initiatives impacts

organisations at different levels, bringing about some benefits. However, it is essential to understand that not all benefits are realisable simultaneously through every knowledge management initiative. It will largely depend on the organisation's needs and the strategies put in place to achieve its goals.

Table 2.2: Knowledge management benefits in organisations

Impact level	Knowledge management benefits
People	Better decision making Enhanced learning Improved communication Improved employee skills Increased employee satisfaction Shared best practices Improved employee loyalty and retention Increased empowerment of employees Enhanced flexibility Improved responsiveness Enhanced customer relations Enhanced customer satisfaction Re-use of information and knowledge
Processes	Increased speed of innovation Developed core competencies Improved business processes Reduction of cycle time New or better way of working Enhanced collaboration Improved productivity/efficiency Enhanced continuity of the organisation Development of new business opportunities
Products	Faster new product or service development Enhanced products or services quality Better management of intellectual capital Increased number of donors Creation of more value to customers Better customer management
Organisational performance	Increased sales/profits Improved revenues through licensing of patents Reduced risk Reduced costs Increased market size Increased market share

Adapted from Anantatmula and Kanungo (2006:29) and Anand and Singh (2011:396) [2]

[2] This table was adapted from Anantatmula and Kanungo (2006:29) and Anand and Singh (2011:396), who originally reviewed literature from several other sources to assess the benefits that can be derived from knowledge management initiatives. Table 2.2 combines the findings of the two researches, presenting only a summary of the observed knowledge management benefits without including the various sources cited.

2.4.1.1 People

Knowledge management processes are often seen purely in terms of information technology, but they are also of significant relevance to people and, therefore, about people. The way individuals learn, share and apply knowledge has a significant influence on the entire knowledge management process. It is, therefore, important for organisations to embrace practices that help and encourage individuals to share and leverage their knowledge in order for business objectives to be met.

i) Employees

Knowledge management facilitates employee learning, promotes flexibility and enhances job satisfaction. Recent studies reveal that, as the knowledge management culture increases, employee satisfaction also increases (Singh & Sharma, 2011:127). The dominant assumption is that in organisations where systems are in place to facilitate sharing of both tacit and explicit knowledge, employees are provided with opportunities to learn, positioning them to positively respond to changing and unpredictable environments.

It emerges from literature that knowledge management practices induce a culture of recognising the value of employees' knowledge and rewarding them for it. As a result, staff turnover rates are reduced, thus the expertise of employees is retained. Conversely, employee turnover is a threat to knowledge management efforts. Fidalgo and Borges Gouveia's (2012:14) recent research suggests that "the success and the competitive advantages of organisations come from the individual knowledge, so the ability to capture and disseminate it within the organisation is a key factor for sustainable success". It is, therefore, evident that turnover can impact negatively on knowledge management efforts. Similar themes are captured in the observation that employee turnover reduces organisational performance, suggesting that knowledge management efforts are negatively impacted, since it is believed that effective knowledge management leads to higher performance (Roblek, Štok, Meško & Erenda, 2013:66).

In addition, knowledge management can amplify the effectiveness of employees in performing their duties by providing them with solutions to problems, especially in

cases where problems have been previously encountered and effectively addressed. Employees who share knowledge feel more effective as this enhances their skills.

ii) Customers

There is a strong body of evidence that tacit knowledge has greater influence on customer satisfaction than explicit knowledge; therefore the need to effectively capture and utilise this type of knowledge (Guchait, Namasivayam & Lei, 2011:521). Managing tacit knowledge strengthens the organisation's relationship with its customers and enhances customers' satisfaction with the company's products.

Organisations such as Ernst & Young, which have successfully harnessed knowledge management, effectively created a knowledge-sharing environment by assigning credit to intellectual contributions (Ezingeard, Leigh & Chandler-Wilde, 2000:813).

2.4.1.2 Processes

The approach to learn from experiences builds knowledge that can then be used to streamline operations and improve processes. Knowledge management has been found to improve the effectiveness and efficiency of organisational processes such as marketing, manufacturing, accounting, engineering, and public relations (Zaied et al., 2012:33). It follows that effective adoption of knowledge management practices helps organisations to select and perform the most appropriate processes, thereby becoming more productive, effective and efficient. Organisations that learn from their mistakes have an opportunity to eventually improve their processes.

Apart from the ability to streamline processes, knowledge management has been found to enhance the process of innovation by ensuring the integration of knowledge in the organisation, making it available and accessible for innovation. Researchers assert that tacit knowledge plays a crucial role in all stages of the innovation process (Alwis & Hartmann, 2008:144). Organisations with knowledge management systems can make tacit knowledge accessible, thus enabling its sharing and codification. Researchers agree that tacit knowledge is a powerful tool, which can give organisations a competitive edge because it cannot be easily replicated by competitors (Du Plessis, 2007:23; Alwis & Hartmann, 2008:144).

Although explicit knowledge is easily accessible by competitors, it still remains an important tool for innovation. Effectively managing explicit knowledge can make it available for re-combinations, enabling exploitation of new ideas. Generally in the innovation process, tacit and explicit knowledge components merge into each other and are quite difficult to separate (Alwis & Hartmann, 2008:144).

Another important aspect of knowledge management is its ability to strengthen collaboration between partners. This increases the extent of tacit knowledge transfer, and as a result can be used as a mechanism to foster innovation. Therefore, the observation that the implementation of knowledge management plays a significant role in pacing up the innovation process is well founded (Akram, Siddiqui, Nawaz, Ghauri & Cheema, 2011:132).

In conclusion, knowledge management has the ability to create a culture that encourages knowledge-based processes and programmes, contributes greatly in the development of sustainable competitive advantage and can be maximised to ensure more efficient and effective organisational processes.

2.4.1.3 Products

Knowledge management practices can be valuable in nurturing creativity in product development. Creative knowledge sharing can also improve product development performance. Therefore, firms can utilise the capacity of knowledge management to positively impact on innovation and expedite the introduction of new value-added products as well as improving the quality of existing products (Yang, 2011:20). Furthermore, businesses can effectively use knowledge processes to better manage their intellectual capital, thereby creating value for their customers.

2.4.1.4 Organisational performance

As more knowledge becomes available, it is becoming more sophisticated, making it more complex to manage. Researchers have therefore taken interest in investigating the exact impact that knowledge management initiatives have on overall organisational performance.

Adoption of knowledge management initiatives has direct and indirect impacts on organisational performance (Hassan & Al-Hakim, 2011:100). Knowledge management impacts organisational performance by impacting employees' attitudes and performance, enhancing relationships with customers, streamlining processes effectively and improving productivity. Furthermore, the usefulness of knowledge management practices in creating innovative products and services can help organisations to generate more revenue and profit (Alwis & Hartmann, 2008:144).

Use of knowledge management can help those who perform their duties while nurturing others to demonstrate intellectual leadership, extending and challenging their ideas. This is vital for better developing and exploiting intellectual resources within individuals, giving an organisation a competitive edge (Turner & Minonne, 2010:168). Although this cannot be directly associated with knowledge management transactions and cannot be easily measured, the indirect impact cannot be under-estimated.

It is clear that knowledge management can ensure competitive advantage of an organisation in the ever-changing business environment. Organisations should therefore take steps to establish themselves as knowledge-creating and -utilising organisations to enable growth at a higher pace and to be competitive in the corporate world. Thus there has to be an understanding that it is not only about businesses having access to an extensive pool of knowledge, but about harnessing this knowledge in a coherent and productive way.

Effective management of knowledge resources can prevent possible loss of important knowledge assets, facilitate decision-making capabilities, correct previous mistakes, improve communication flow with customers, stakeholders and among employees and improve the quality of services (Kothari et al., 2011:3). In addition, knowledge management initiatives can be a good catalyst for building learning organisations by making learning routine and stimulating cultural change and innovation.

There are, however, no set of agreed approaches and strategies for maximum results (Anand & Singh, 2011:937; Kothari et al., 2011:6). Organisations are using different knowledge management strategies such as technology, process-based models and

communities of practices to capture and share knowledge. Clearly, the field of knowledge management is still evolving and researchers are yet to agree and put in place the most effective strategies.

There are significant numbers of researchers who have investigated the link between knowledge management practices and organisational performance, as shown in Table 2.3. Although a majority of these researchers confirm the existence of this link, some authors challenge that the link is not obvious. Kalling (2003:67) argues that current research into knowledge management fails to recognise and offer a detailed understanding about the role of knowledge in improving the performance of firms. His proposition that research should also direct attention to the factors that enable knowledge to contribute to performance instead of focusing exclusively on the nature and attributes of knowledge and the management of learning, is thought-provoking.

This study will use the bid to argue that although researchers have linked organisational performance to knowledge management practices in for-profit organisations, the factors that enable knowledge to contribute to performance in NGOs may be different from those of the for-profit sector, and we cannot, therefore, generalise the findings. In order to contribute to the knowledge gap in the research on knowledge management practices in NGOs, this study will explore the quality of knowledge management practices and success factors in NGOs, putting into consideration the structures and operational contexts of these organisations.

A summary of studies investigating the link between knowledge management practices and organisational performance is given in Table 2.3. The table shows indicators used to measure performance and the key findings of these studies are provided.

Table 2.3: Research that explores the link between knowledge management and organisational performance

Link confirmed?	Key findings	Performance indicators used	Author
Yes	Direct and indirect relationships between critical success factors of knowledge management and organisational performance were confirmed.	Financial perspective. Customer perspective. Internal processes. Learning and growth.	Hassan and Al-Hakim (2011:100)
No	Results reveal that the link between knowledge management and organisational performance might not always exist. Not all knowledge is used and even if used, might not result in profits due to other factors.	Profitability. Productivity.	Kalling (2003:78)
Yes	The study observes that levels of knowledge management practices and competences are among the important criteria for determining and improving the performance and delivery system of organisations.	Perceived usefulness. Extrinsic and intrinsic motivation. Job fit relative advantage. Outcome expectation.	Raja Suzana (2010:223)
Yes	Findings suggest a direct relationship between knowledge management practices and organisational performance. An indirect relationship is also seen between knowledge management practices and financial performance.	Return on assets. Profitability. Return on equity.	Zack, Mckeen and Singh (2009:404)
Yes	Research concludes that knowledge management is closely linked to the financial performance of an organisation. Some knowledge management success factors, which are significantly related to financial indicators, were identified.	Return on sales. Return on assets.	Vidović (2010:12)
Yes	A significant correlation between knowledge management capabilities and organisational performance was observed. Researchers further suggest that if the quality of organisational knowledge is good, management performance improves significantly.	Productivity. Profitability. Market share. Sales growth. Innovativeness. Cost performance. Competitiveness.	Zaied et al. (2012:33)
Yes	The study confirms a positive and outstanding influence of knowledge management process on firm performance. It is further suggested that companies can benefit from an increased effectiveness in business strategy through the use of knowledge.	Market share gain. Sales growth. Profitability. Efficiency of operations. Quality of services.	Chang and Chuang (2011:6174)
Yes	The results show that some knowledge resources such as organisational structure, knowledge acquisition, knowledge application and knowledge protection are directly related to organisational performance, while others such as technology, organisational culture and	Financial performance. Service.	Mills and Smith (2011:167-168)

	knowledge conversion are not directly related to organisational performance. The overall knowledge management capability is related to the organisational performance.		
Yes	It was shown that knowledge management practices positively and significantly influences organisational performance. Improvement of knowledge management practices can play a crucial role in improving the organisational performance.	Productivity. Financial performance. Staff performance. Innovation. Work relationships. Customer satisfaction.	Gholami et al. (2013:212–213)
Yes	Direct and indirect relationships between critical success factors of knowledge management and organisational performance were confirmed.	Effectiveness. Efficiency.	Lettieri et al. (2004:29)
Yes	Results reveal that the link between knowledge management and organisational performance might not always exist. Not all knowledge is used and even if used, might not result in profits due to other factors.	Effectiveness. Communication. Efficiency.	Safa et al. (2006:84)

It is noticeable in Table 2.3 that most of the researchers who investigated the link between knowledge management practices and organisational performance focused their studies on for-profit organisations; using financial performance, productivity, quality of products and profitability as performance measures. Although not much research has focused on the quality of knowledge management practices in NGOs and their possible contribution organisational performance, some valuable work has been done. Safa et al. (2006:69–86) discuss knowledge management practices of NGOs in Maldives and their linkages to organisational performance and Lettieri et al. (2004:16–30) focuses on the role of knowledge management on performance improvement and achievement of excellence in NGOs. The insightful discussions of both researchers will be built on in this study.

2.5 Factors that influence the success of knowledge management

Despite all the aforementioned benefits brought by knowledge management in the business sector, it is also important to heed that there are factors that can influence the success of knowledge management practices in both positive and negative ways. NGOs will be better prepared to pursue the opportunities and benefits opened up by knowledge management initiatives if they fully perceive the significance of these factors.

There is therefore a need to examine some of the factors that can influence the success of knowledge management in organisations, particularly in the non-profit sector. This section will explore the influences of awareness of knowledge management, knowledge management culture, knowledge management strategy, information technology for knowledge management, training, performance, knowledge management infrastructure, knowledge management holders and measuring knowledge management. These factors were drawn from literature, where various researchers identified them as common influences of knowledge management ambitions in the non-profit sector, as shown in Table 2.4.

Table 2.4: Factors influencing the success of knowledge management in the non-profit sector

Success factor	**References**
Awareness of knowledge management	Safa et al. (2006:82); Corfield et al. (2013:186)
Knowledge management culture	Safa et al. (2006:72); Hume et al. (2012:87); Cardoso et al. (2012:268); Chen (2010:80); Vidović (2010:9); Hassan and Al-Hakim (2011:97); Yeh, Lai and Ho (2006:794)
Knowledge management strategy	Safa et al. (2006:73); Hassan and Al-Hakim (2011:97); Yeh et al. (2006:794)
Information technology for knowledge management	Safa et al. (2006:71); Hume et al. (2012:87); Chen (2010:79); Vidović (2010:9); Hassan and Al-Hakim (2011:97); Yeh et al. (2006:794)
Training and knowledge management	Safa et al. (2006:73); Cardoso et al. (2012:268); Chen (2010:79)
Performance and knowledge management	Safa et al. (2006:73); Hume et al. (2012:87); Chen (2010:80)
Knowledge management infrastructure	Chen (2010:79); Vidović (2010:9)
Knowledge management holders	Chen (2010:79); Vidović (2010:9)
Measuring knowledge management	Chen (2010:80); Vidović (2010:9)

2.5.1 Awareness of knowledge management

Given that there has been considerable attention and interest in knowledge management from both practitioners and academics, an understanding of knowledge management is now important for any business. In order for organisations to harness the power of the information and knowledge it generates, its members must be positively aware of the knowledge management initiatives and their role in the implementation of the knowledge management system. The level of awareness determines the spread of knowledge management practices in NGOs.

Ironically, it has been ascertained that there is moderate awareness of knowledge management initiatives within NGOs (Cardoso et al., 2012:269; Matzkin, 2008:152). This is detrimental to the effective utilisation of knowledge, as knowledge management strategies are a result of managers' awareness of trends in the current business environment. It is not surprising to notice that where the awareness of knowledge management initiatives is low, there are no plans to implement a formal knowledge management process in the near future (Matzkin, 2008:152). This supports the observation that the greater the awareness, the better the cultivation and use of knowledge resources in an organisation (Corfield et al., 2013:186).

2.5.2 Knowledge management culture

What is culture, and what is its relationship to knowledge and knowledge management? This question can be looked at in two dimensions. First, by looking at how cultural diversities can act as barriers in sharing and transferring of knowledge, especially in NGOs, which are often characterised by multi-cultural individuals. The second dimension, which is the main focus of this section, is to look at how the shared and learned behaviour among individuals in an organisation influences knowledge management.

A number of studies contend that culture is a necessary premise, and a vital element in the implementation of knowledge management (Hassan & Al-Hakim, 2011:96; Anantatmula & Kanungo, 2006:31; Yeh et al., 2006:795). These researchers assert that the success of knowledge management depends on adoption of a culture that provides an environment for creation, acquiring, sharing and management of knowledge within a context. Ajmal, Helo and Kekale (2010:161) include knowledge-friendly culture, open organisational culture and friendly organisational culture in their list of enablers of successful knowledge management initiatives. This is consistent with findings of recent research that confirms a link between a knowledge-centred culture and the success of knowledge management practices, confirming that adopting proper knowledge-sharing processes can be very challenging without a proper organisational culture (Cardoso et al., 2012:271; Chang & Chuang, 2011:6174).

The challenge to influence the organisational culture in a positive way is mainly placed upon managers. It is thought that the leadership of an organisation is key for creating a culture that supports knowledge-sharing activities and encourages workers to employ knowledge management practices in fulfilling their activities (Yeh et al., 2006:795). It is therefore imperative for managers in NGOs to push for organisational knowledge cultures characterised by high levels of trust, commitment and motivation, as this has been proven to have a huge impact on knowledge conversion (Tseng, 2010:273).

It is further observed that in as much as knowledge management culture is an enabler to the implementation of knowledge initiatives, it can also be a barrier. In fact, Ajmal et al. (2010:169) present an interesting argument that the status of any given factor as an enabler or barrier depends on how it is managed. There are some personal, group and organisational cultures that can be detrimental to the success of knowledge management initiatives, such as a culture where individuals perceive accessing another's knowledge as a sign of inadequacy, knowledge hoarding culture and a culture of politicking knowledge management projects (Chua & Lam, 2005:14).

On the other hand, the opinion that NGOs have difficulties in establishing an effective knowledge management culture shows that these organisations still need to work through corporate culture, workflow processes and the integration of staff members' knowledge. Both organisational culture and knowledge management depend on human dimensions, however NGOs tend to focus more on system-oriented practices than human-oriented practices (Turner & Minonne, 2010:167; Hassan & Al-Hakim, 2011:96). This can also be attributed to the fact that NGOs work with many external partners therefore in some cases they have to negotiate their organisational cultures with their partners.

Given the above, non-profits must thoroughly examine their organisational culture to determine the barriers to the success of knowledge management initiatives. Investing in new organisational processes and encouraging cultural change within the organisation will be worthwhile: a culture that allows knowledge management to become an integral part of the overall organisational culture is crucial for the success of knowledge management initiatives (Turner & Minonne, 2010:165).

2.5.3 Knowledge management strategy

When it comes to the implementation of knowledge management initiatives in organisations, there is no uniform approach. Each organisation has to come up with its own simple, efficient and standardised strategy, which is "firmly rooted in its core competencies, embedded in its work processes" and aligned to its goals (International Fund for Agricultural Development [IFAD], 2007:6). Apart from equipping organisations with frameworks and tools required for the successful managing of knowledge resources, a strategy aligns knowledge management initiatives to a set of performance measures for evaluating their effectiveness.

NGOs should recognise the need to facilitate and promote the knowledge management process, demonstrating the benefits of knowledge management initiatives, particularly in cases where there is competition for funding among projects (Carrillo et al., 2003:2). It is noticeable that the adoption of a proper knowledge management strategy can help to facilitate the transformation of the various types of knowledge within an organisation and also provide an evaluation mechanism to measure its impact.

Several researchers concur with the view that aligning a knowledge management strategy to the organisation's strategic objectives and goals is very vital for its effectiveness (Carrillo et al., 2003:8; Chang & Chuang, 2011:6164; Hassan & Al-Hakim, 2011:96). Knowledge management implementation must therefore support the strategic direction of the organisation and, in turn, the choice of knowledge management practices must be tied to the strategic direction of an organisation (Turner & Minonne, 2010:165; Hassan & Al-Hakim, 2011:96). In other words, the success of knowledge management initiatives in any organisation are strongly linked to the identification of proper knowledge management strategies that better support the organisation's goals.

Organisations still have challenges deriving knowledge management targets from the overall corporate strategy (Turner & Minonne, 2010:167). It is striking to note that although knowledge management practices exist in most organisations, they are not linked to performance strategies (Robinson, Carrillo, Anumba & Al-Ghassani,

2005:212). In such situations, the knowledge management practices cannot be harmonised for organisational improvement since they remain implicit (Matzkin, 2008:156). There is therefore need for concrete strategies in the non-profit sector that will "provide a fundamental paradigm shift from the traditional operational approach to a more strategic involvement in knowledge management" (Turner & Minonne, 2010:167).

2.5.4 Information technology for knowledge management

The past two decades have seen researchers taking interest in the use of IT in knowledge management (Borghoff & Pareschi, 1997:835–842; Chua & Lam, 2005:6–17; Zorn, Flanagin & Shoham, 2010:1–33; Andreeva & Kianto, 2012:617–636; Fidalgo & Borges Gouveia, 2012:1–16; Okumus, 2013:64–80). These researchers agree that although IT is an indispensable enabler of knowledge management practices, it does not work in isolation, but in combination with other factors such as an organisational culture oriented towards knowledge value and effective human resources management.

Use of IT tools such as Internet, Intranet, competency databases, decision support systems, online search systems, expert networks, email, groupware, teleconference, document management systems, video conferences, data warehousing, workflow software and many other tools can facilitate creating, storing, transferring and use of knowledge (Okumus, 2013:64). Information technologies have not only been considered facilitators of knowledge management processes but also mediums for the flow of knowledge (Okumus, 2013:71; Borghoff & Pareschi, 1997:837; Fidalgo & Borges Gouveia, 2012:14).

Given the above, NGOs need to harness the capability of IT to integrate knowledge into their organisational routines. Investing in strengthening their information management systems and mapping their knowledge needs to supporting technologies can be worthwhile. They will, however, need to keep in mind that excessive investments in IT without proper processes can be in vain. It is crucial to strategically align IT platforms with knowledge management initiatives, bearing in mind the limits of these IT systems (IFAD, 2007:14).

Technology can also be a barrier to the success of knowledge management initiatives if inadequate mechanisms are put in place for its adoption. Chua and Lam (2005:13) list the following as failure factors for knowledge management practises: poor connectivity, poor level of usability of systems, over-reliance on IT and high cost of adoption and maintenance of IT tools.

As has been stressed by many researchers, information technology platforms are crucial facilitators of knowledge work processes, and the application of rapidly-evolving technologies to knowledge initiatives is vital (Fidalgo & Borges Gouveia, 2012:14; Okumus, 2013:71). In fact, it is argued that the increasing amount of technological integration is responsible for the evolution of knowledge management (Raja Suzana, 2010:220). NGOs therefore need to look at the suitability of the supporting technology and processes for their employees' productivity needs. However, the fact that IT tools alone do not facilitate knowledge management should not be ignored: changes in cultural values and adoption of proper human resources practices are required (Andreeva & Kianto, 2012:631; Borghoff & Pareschi, 1997:837).

2.5.5 Training and knowledge management

Generally organisations are at risk of losing valuable knowledge due to retirement and turnover of employees who are the knowledge creators and bearers. Efforts should therefore be made to ensure that knowledge is shared between individuals, thus capturing explicit and tacit knowledge through the use of training. The observation, corroborated by other research, that "firms with greater training will be more successful in responding to changing environments and in developing new capabilities that allow them to achieve better knowledge levels" (Khaksar et al. 2011:1069) is thought-provoking and should attract the attention of organisations who wish to succeed in the field of knowledge management.

Cardoso et al. (2012:272) reveal the key role that training as part of a knowledge-centred culture can play in the success of knowledge practices. These researchers argue that knowledge-centred organisations should invest in training to renew and increase their knowledge base, improve the performance of employees and to train

knowledge management procedures. It is, therefore, imperative for these organisations to design and implement training programmes related to their work activities.

A significant positive relationship between training of human resources, knowledge management and organisational performance has also been established (Khaksar et al., 2011:1076). It is observed that training alone is not sufficient to enhance organisational effectiveness, but productive application of knowledge and skills acquired during the training must also take place to realise the full benefits (Rahman et al., 2013:473).

Apart from motivating employees to be innovative and to share their knowledge, training has also been considered to be a fundamental factor in facilitating individual and organisational learning (Mills & Smith, 2011:160). Training is one of the most prominent facilitating conditions for the success of knowledge management practices, as it emphasises nurturing, preservation and managing of organisational knowledge throughout the organisation (Cardoso et al., 2012:277; Garcia & Larsen, 2012:2). Therefore, the belief that "only desire for organisational improvements and not so much of staff-level advancement or professional development" contributes to the success of knowledge management practices (Kothari et al., 2011:6), requires some scrutiny.

While research concurs about the crucial role of training in knowledge management practices, the revelation that the non-profit sector seems to place less importance on developing the skills of their personnel by investing very small amounts in their training budgets (Matzkin, 2008:156) is quite striking. NGOs should seriously consider investing in continuous learning opportunities for employees that could improve and renew skills and knowledge needed to perform their work activities. No doubt having knowledgeable employees can be invaluable in setting an organisation apart from its competitors.

2.5.6 Individual performance and knowledge management

Effective knowledge management provides employees with solutions to problems they face in cases where similar problems have been encountered earlier and

effectively addressed, amplifying their effectiveness in performing their jobs. The role of knowledge in facilitating innovation can be of significant value to both individuals and the organisation (Alwis & Hartmann, 2008:144). Therefore the conclusion that effective knowledge sharing has a positive contribution to individual performance is well founded, and one that the researcher believes in (Akram & Bokhari, 2011:47).

This way of thinking urges the non-profit sector to utilise knowledge and facilitate employee learning, promote flexibility and enhance job satisfaction, ultimately improving the performance of employees and that of the organisation. In addition, these organisations should foster a knowledge management culture, which boosts the motivation of employees (Singh & Sharma, 2011:127). Successful knowledge management can align employees with changing environments, enabling them to quickly solve new and complex challenges.

Drawing from the above, it can be concluded that effective adoption of knowledge management initiatives is necessary for improving individual performance.

2.5.7 Knowledge management infrastructure

Knowledge management infrastructure plays a crucial role in the support and expansion of knowledge management. In fact, it is argued that providing knowledge management infrastructure is a prerequisite for implementing knowledge management activities (Vidović, 2010:12). Prior research recognises how essential having an appropriate, supportive and effective knowledge infrastructure is to enhance the knowledge management processes (Chang & Chuang, 2011:6174; Mills & Smith, 2011:165; Gold, Malhotra & Segars, 2001:186; Zaim et al. 2007:55). Ajmal et al. (2010:159) cited technology infrastructure, organisational infrastructure and information systems infrastructure as enablers of knowledge management initiatives. The authors do, however, point out that a technical infrastructure that cannot sufficiently support the use of applications by employees is detrimental to the success of knowledge management practices.

Although Vidović (2010:12) found no link between infrastructure and performance, many other researches have confirmed this link (Chang & Chuang, 2011:6174; Gold

et al., 2001:186). These researchers concur that developing a good technical infrastructure is key for capturing, searching, retrieving and displaying knowledge, thereby improving the knowledge management processes.

Unfortunately, the development of solid knowledge infrastructure is still in its infancy within the non-profit sector (Renshaw & Krishnaswamy, 2009:461). This can be attributed to the financial constraints in NGOs, which limit their ability to put up reliable and fully extensive knowledge management infrastructure. In addition, the autonomous nature of NGOs adds to their challenges in establishing solid knowledge infrastructures (Saeed, Rohde & Wulf, 2008:442). These constraints affect the equitable distribution of information in NGOs, especially in rural areas where some of these NGOs operate.

2.5.8 Knowledge management holders

There is a powerful saying: "A man can only attain knowledge with the help of those who possess it" – George Ivenovich Gurdjieff. This shows the criticality of identifying key knowledge holders within an organisation, and providing means for many diverse knowledge holders to share their knowledge and experiences. The knowledge base of an organisation is typically spread among many different units, groups and stakeholders (Lettieri et al., 2004:23).

Fostering knowledge management is not only about supporting the knowledge holders, but also supporting the relationship that creates ties between knowledge holders. NGOs must therefore work on creating an environment where strong relationships can be developed to persuade knowledge holders to share it, especially considering the high staff turnover these organisations experience due to volunteering and staff rotations. Knowledge holders can also encompass virtual holders of knowledge such as databases and manuals.

2.5.9 Measuring knowledge management

In these uncertain economic times where organisations, especially NGOs, are financially constrained, knowledge management practitioners need to be able to show the business value brought by knowledge sharing and re-use in their organisations

(Turner & Minonne, 2010:161; Anantatmula & Kanungo, 2006:26; Moballeghi & Galyani Moghaddam, 2011:316). It is therefore imperative to make this part of the organisation's strategic knowledge management objectives. Apart from stimulating management's focus on what is important, building effective measures around knowledge sharing enables tracking the success of its implementation, identifying key milestones and showing return on investment (Turban & Aronson, cited in Anantatmula & Kanungo, 2006:26).

However, organisations should keep in mind that measuring the effects of knowledge sharing and re-use can be a challenge as there is no systematic way of linking the knowledge-sharing action to a business result. As a result, research findings indicate a significant number of organisations active in knowledge management are unable to evaluate their knowledge management performance due to lack of appropriate tools and skills to do so (Turner & Minonne, 2010:164).

2.5.10 Summary

If NGOs are to reach their maturity in the knowledge management field, it is imperative that they identify forces that conspire to influence the knowledge management initiatives while being cautious that the context plays a major role. This can then lead to the pivotal task of identifying appropriate knowledge management practices and relating them to the organisation's performance. The process involves putting in place measurements of knowledge management effectiveness at the outset of any knowledge management implementation, to ensure that the knowledge initiatives adopted are effective and efficient (Vidović, 2010:12). The above observations lay bare the fact that unconscious adoption of knowledge initiatives may not be very effective as there will be no way of demonstrating that knowledge management initiatives have created value and benefits to the organisation.

2.6 Knowledge management practices in NGOs

Matzkin (2008) and Lettieri et al. (2004) are among a few researchers whose work focuses on knowledge management in the non-profit sector. These authors concur that although there are medium to low levels of knowledge management awareness in NGOs, knowledge management can play a pivotal role in achieving excellence in the

non-profit sector. The challenge, however, is that the role of knowledge management practices in meeting the goals and improving services for NGOs is not well understood.

Matzkin (2008:151) observes that much of the knowledge management practices in third world NGOs are not by conscious adoption and not specifically linked to innovation but rather to short-term organisational needs. Similarly, Renshaw and Krishnaswamy (2009:458) used Debowski's model of knowledge development to assess the conscious adoption of knowledge management strategies in sourcing, abstraction, conversion, diffusion and development by NGOs, and found that there is very low conscious adoption of knowledge management strategies in the non-profit sector. This further confirms the limited understanding of the importance of knowledge management in this sector.

Again, it is argued that "many organisations still view knowledge management as launching some software programs without adequate consideration of their organisational characteristics" (Zaied et al. 2012:33). The question which then follows is: are NGOs deriving any benefits from unconsciously adopting knowledge management practices? Previously, the success of knowledge management practices has been linked to the ability of organisations to demonstrate the linkages between knowledge management practices and organisational objectives (Turner & Minonne, 2010:166; Smits & Moor, 2004:8). Thus there is a need to consciously move to specific objectives, creating a knowledge management environment that is made up of appropriate technology, cultural, structural and human resources.

The demand for integrated, tailored and timely services urges NGOs to follow new intellectual perspectives so as to continuously improve their performance and services (Lettieri et al., 2004:22). These authors even designed a knowledge management cycle, which could be very useful for managing knowledge in non-profit organisations. The cycle comprises of knowledge acquisition, codification, storage, retrieval, diffusion and presentation, application, and creation.

Although NGOs are considered to be knowledge intensive, there is a striking contrast between the amount of knowledge and the rate at which these organisations put

practices in place to manage this knowledge (Renshaw & Krishnaswamy, 2009:462). This leads to the question: "Does integrating knowledge management practices bring any value in these organisations and to what extent?"

The overall conclusion drawn from these studies is that if NGOs are to derive significant benefits from knowledge management practices, they need to demonstrate the presence of knowledge management practices that are objectively implemented. No doubt NGOs can creatively adapt knowledge management principles to capture, utilise and communicate the knowledge brought by individuals to the organisation, resulting in constant improvement growth and exposure. The visibly limited literature about knowledge management practices in the non-profit sector, which can help NGOs to implement and review knowledge management process to address specific challenges, underlines the need to explore this subject and help NGOs to strategise.

2.6.1 Differences between corporate organisations and NGOs

Before applying lessons learnt from the business sector in NGOs, it is worth noting the differences in organisational contexts that exist between these two sectors. Although there are similarities between the for-profit and the non-profit sectors, there are considerable structural and operational differences between them. Therefore, strategies used by the for-profit sector may need to be tailored for the non-profit sector to realise some benefits (Renshaw & Krishnaswamy, 2009:462; Matzkin, 2008:154). Researchers observe that the organisations' sector type and size affects the role of knowledge management in enhancing the organisational performance, therefore knowledge management practices should differ according to the organisation type (Zaied et al., 2012:33; Matzkin, 2008:154).

Due to their structural and operational contexts, NGOs face a number of constraints, which include high staff turnover, projects or missions depending on personality rather than experience, the organisation repeating the same mistakes and duplication of efforts (Vasconcelos, Seixas, Chris & Lemos, 2006:124). Adoption of proper knowledge management initiatives can go a long way in alleviating these problems. For instance, if all the knowledge carried away due to turnover could be collected, organised, used and built upon by the remaining individuals, then more time would be

spent on productive ventures rather than on reconstructing the past, searching for missing information, and repeating mistakes. This would result in increased personal satisfaction of employees, which would lead to decreased turnover.

NGOs, however, have to overcome a number of challenges in order to successfully adopt knowledge management strategies. These challenges include:

- Unstable organisational structures
- Difficulties in keeping up with rapidly evolving technologies
- Diversity and highly distributed working practices
- Lack of permanent hierarchy
- Decentralised nature of their projects

Firstly, these organisations are characterised by unstable organisational structures, diversity and highly distributed working practices in their operations. The involvement of operational and implementing partners in their work also introduces intercultural and work practices issues. Challenges of communication, for example, between the field mission and the main office, between NGOs, between NGOs and their beneficiaries, between NGOs and civil society or between NGOs and their donors, can cause some constraints in knowledge management adoption (Vasconcelos et al., 2006:124). In contrast, the business sector normally has small and efficient boards with a less bureaucratic set up and they are staffed and equipped at a much higher level than non-profit organisations. In other words, the for-profit organisations are less complex than NGOs of comparable size.

Secondly, IT systems are considered to be very important tools in facilitating the knowledge management practices for better performance in organisations (Safa et al., 2006:72). Although both sectors experience common influences of technological pressure that derive from the need for operational optimisation, NGOs fail to keep up with their for-profit counterparts in the complexity of their operational methodologies. Andreeva and Kianto (2012:621) echo the trend in the literature that emphasises the importance of information and communication technologies, further observing that IT practices strongly influence both financial performance and competitiveness of firms. But due to the rapidly evolving nature of these technologies, organisations require

integrated, adaptive and flexible enterprise information architecture that enforces knowledge management (Malhotra, 2010:328).

Literature has highlighted that the adoption of IT is still at its infancy in NGOs as compared to their for-profit counterparts (Schneider, 2003:383; Saeed et al., 2008:438). This is due to a number of factors, which differentiate the way in which IT is adopted in these organisations compared to the business sector. Firstly, NGOs depend on donor funding and, in most cases, the donors are interested in funding only the core activities of the organisation. In as much as some of these organisations may appreciate the importance of IT systems, they lack resources to support them. On the other hand, the business sector has the financial muscle to dedicate funds for setting up of IT infrastructure.

In addition, NGOs cover large geographical areas, in some cases with huge distances between head office and field locations, some of the latter being very remote, adding to the complexity of designing IT systems and managing IT infrastructure for these organisations.

Thirdly, the work of NGOs involves various governmental and non-governmental partners at different levels. These partners have different working cultures and practices, adding to the complexity. Additionally, these organisations are supported by volunteers who may lack IT capabilities, thus less emphasis is placed on developing IT infrastructures. This inhibits the uptake of IT systems in the non-profit sector. Conversely, for-profit businesses have dedicated staff establishing and supporting their IT infrastructure, and IT literacy is a fundamental requirement for their staff.

Finally, NGOs, especially the smaller ones, lack permanent hierarchy, which may result in inconsistencies in decision making, posing difficulties in establishing IT systems.

It is, therefore, apparent that NGOs find it more difficult to catch up with the evolving technologies than their for-profit counterparts. Saeed et al. (2008:440) attribute the "obstacles in gaining technological appropriation" in NGOs to the structures of such

organisations. These authors draw attention to differences in language, background, working habits and culture among NGOs operating in different regions, which adds further complexity in designing an effective IT infrastructure that could better prepare the NGOs to carry out their roles in the knowledge society.

In addition, most NGOs are project-based organisations, thus they organise their operational and development activities in project form. The decentralised nature and time-constrained ways of working combined with loose coupling between projects in project-based organisations poses particular challenges for attempts to diffuse and embed new knowledge and learning within the organisation (Lindkvist, 2004:5). Ajmal et al. (2010:164) note the absence of proper systems to handle knowledge in the project-based organisations as one of the significant barriers to the success of knowledge management initiatives in such organisations. Technology, culture, content and project management were also identified to be failure factors for knowledge management initiatives in project-based organisations (Chua and Lam, 2005:11).

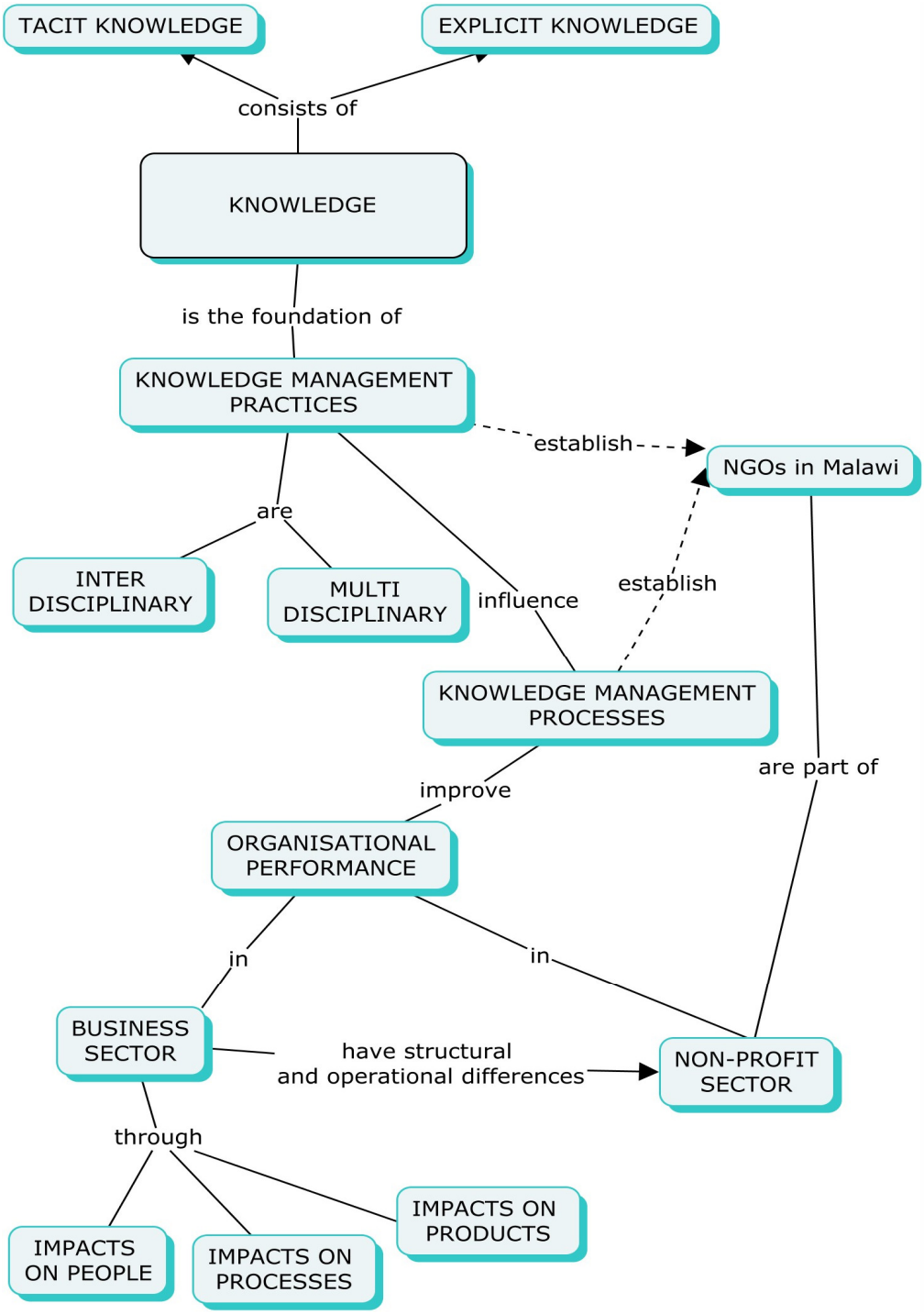
2.6.2 Summary

It is striking from the above arguments that although knowledge management practices are vital to NGOs, the structural and operational contexts of these organisations, coupled with the challenges in embracing the ever-evolving technologies, can bring significant complexities to the success of knowledge management initiatives. These severe constraints can restrict the further development of knowledge management activities. At the same time, NGOs need to be cautious and selective while implementing knowledge management practices as not all ideas originating from the private sector will transfer into the non-profit sector, as there are significant differences between these sectors.

2.7 Chapter summary

In this chapter literature was reviewed to discern the knowledge management practices in organisations and how these practices influence knowledge management processes and organisational performance, both in the business sector and in NGOs. The research gap was then documented as illustrated in Figure 2.3.

Figure 2.3: Concept map



It was gathered from the literature that effective management of tacit and explicit knowledge allows them to merge into each other and that leveraging this knowledge gives organisations a significant competitive edge. Besides effective knowledge management's capability to enable routine and organised tasks, helping to meet work goals and objectives, it also promotes creative, flexible, unchartered and divergent ways of thinking, which can be useful in responding to changing and unpredictable environments. It is also prominent in the literature that knowledge management is both multidisciplinary and interdisciplinary, therefore, its roots are from diverse disciplines and it draws upon theories and practices from many disciplines. One can link the continuous evolution of this field to its nature.

According to the literature, there have been several proven benefits realised by the business sector upon successful implementation of knowledge management practices. These comprise the positive impact on people, processes and products, which ultimately translates to improved organisational performance. Many authors have confirmed a significant relationship between knowledge management practices and the organisational performance in the for-profit sector (Zack et al., 2009:404; Chang & Chuang, 2011:6174; Zaied et al., 2012:33; Gholami et al., 2013:212–213).

Does this relationship also apply to the non-profit sector, considering that the two sectors have significant structural and operational differences? Drawing from the literature, one can conclude that although a link was established between effective adoption of knowledge management practices and organisational performance in the for-profit sector, NGOs may need to selectively implement knowledge management practices as not all ideas originating from the private sector will be applicable in the non-profit sector.

Quite a few researchers (Safa et al., 2006:69–86; Lettieri et al., 2004:16–30) explored the knowledge management practices in NGOs and their linkages to organisational performance. However, these studies don't cover how knowledge management practices influence the knowledge management process to impact performance. Moreover, the studies are based on the case study method, raising questions about the generalisability of research that aims to capture the rich complexity of knowledge management practices in the non-profit sector. Just recently, some research

investigated the ways and extent to which knowledge management contributes to enhancing productive opportunities in NGOs (Corfield et al., 2013:179–188). This research was based on a case study of first world NGOs that are considered to be more mature than their counterparts in third world countries.

Literature also explored the level of knowledge management awareness and practices in third world NGOs (Matzkin, 2008:147–159). This study will build on these researches, providing further statistical-based analysis of the quality of knowledge management practices and success factors in Malawian NGOs. This research will also establish the influence of these practices on the knowledge management process and how this, in turn, affects organisational performance.

Having undertaken a review of the available literature, and having analysed the knowledge gaps in this literature, this research will now focus on the quality of knowledge management practices and success factors in Malawian NGOs. Chapter 3 will focus on an empirical study examining and establishing the knowledge management practices being implemented by NGOs in Malawi and ascertaining the degree to which these practices are being implemented.

CHAPTER 3: RESEARCH DESIGN AND METHODOLOGY

3.1 Introduction

This research carried out an empirical investigation with the main goal of examining the quality of knowledge management practices and success factors in Malawian NGOs. The objectives of the study were to establish the knowledge management practices being implemented by NGOs in Malawi, ascertain the degree to which these practices are being implemented and to determine their influence on the knowledge management process. The employed procedure could be a useful tool for NGOs to assess the effectiveness of knowledge management practices in their organisations in the future.

Efforts were made to address questions such as: Which knowledge management practices are being implemented by NGOs in Malawi and to what extent? What influence do these practices have on the knowledge management process? What are the relationships among the knowledge management success factors?

This section firstly describes the philosophical perspectives and approach used to address the study questions. Secondly, the framework of the research design is described and the research methodology and procedures adopted are discussed. Thirdly, the population under study and the sampling method are articulated. Fourth, the chapter looks at the measures adopted to assess the variables under consideration. This is followed by a discussion of the data collection methodology, how the data collection instruments were developed and used and the procedures followed to ensure collection of reliable data. Finally, the section describes how the gathered data was analysed to expose hidden meanings and patterns.

3.2 Research paradigm

This research focuses on measuring knowledge management success through measuring knowledge management success factors. This involves investigating the knowledge management practices being implemented by NGOs and how they influence the success of knowledge management initiatives.

Research experts speak of important philosophical perspectives such as positivism, realism, pragmatism and interpretivism, which significantly impact the understanding that the researcher has of the issues under investigation and, consequently, how research questions are addressed (Saunders, Lewis & Thornhill, 2009:114). This study addressed the research questions by adopting the philosophy of positivism to identify, explore and explain the knowledge management practices in Malawian NGOs and how they relate to the knowledge management process. Given the subjective nature of interpretivism and its inclination to seek in-depth details from small samples (Saunders et al., 2009:114), the approach was considered unsuitable to meet the current study's research objectives. While pragmatism is often chosen by researchers in answering a research question and may seem an appealing approach for its concession to the use of mixed methods, it tends to give more attention to applied research than basic research (Saunders et al., 2009:109; Johnson & Onwuegbuzie, 2004:18). This study is a basic research that seeks an understanding of knowledge management practices. Therefore, the pragmatic approach was not suitable, leading to the adoption of positivism.

Positivism is based upon a highly structured methodology enabling the collection of data from large social samples. It emphasises quantifiable observations that can be analysed and evaluated with the help of statistical analysis. This kind of approach facilitates generalisation and replication of findings. The researcher's own beliefs have no value to influence the research study (Saunders et al., 2009:114). Although positivism has been criticised for being based on a notion of pure observation, it remains a favoured approach in information systems research as it leads to a focus on the need for good tools and methods that could safeguard against subjectivity (Bharadwaj, 2000:2). This approach was seen to best suit the problem under consideration, as well as the objectives of the researcher, given its suitability when collecting data from large samples in a highly structured way (Saunders et al., 2009:114).

For the purposes of this research, positivism facilitated a deductive generation of a pattern of meanings throughout the research process using a statistical-based analysis of knowledge management practices being implemented by NGOs and the extent to which these practices are being implemented. A deductive approach was chosen given

its emphasis on collection of quantitative data in a highly structured manner, permitting the explanation of causal relationships between variables and the application of controls to ensure validity of data (Saunders et al., 2009:152)[3].

These attributes of the deductive approach were key for assessing the knowledge management practices in Malawian NGOs and prove the existing theories that knowledge management practices have an influence on the knowledge management process. Knowledge management practices were measured quantitatively and causal relationships between these practices were explained. Although some may argue that quantitative research limits the researcher's categories (options given to respondents may not reflect the actual practices on the ground), the factors and practices under consideration were drawn from literature that implemented quantitative research and identified the most common knowledge management practices (Safa et al., 2006:71–83; Hume et al., 2012:86; Chen, 2010:80; Vidović, 2010:9–10).

Furthermore, the limited literature on knowledge management practices in NGOs, particularly in developing countries like Malawi, necessitated the collection of quantitative primary data, which was then analysed to elicit patterns and theoretical themes. This exploratory method allowed the researcher to gain insights about the knowledge management practices being implemented by NGOs in Malawi and the extent to which they are being followed through.

Awareness of knowledge management, knowledge management culture, knowledge management strategy, information technology for knowledge management, training and knowledge management, individual performance and knowledge management, knowledge management infrastructure, knowledge management holders and measuring knowledge management were identified as the most common success factors in NGOs and were therefore used as variables. A correlation analysis between the various success factors was performed.

---

[3] Research can use an inductive or a deductive approach. Unlike the latter, an inductive approach focuses on gaining a close understanding of a particular situation in a particular context. It mainly relies on qualitative data collected in a more flexible structure and it is less concerned with the need to generalise (Saunders et al., 2009:126).

3.3 Research design and strategy

Literature groups research purpose into three groups: exploratory, descriptive and explanatory (Saunders et al., 2009:138). As the current research study focuses on examining the quality of knowledge management practices and success factors in Malawian NGOs and due to the limited literature in this area of study, particularly in developing countries like Malawi, the researcher adopted an exploratory research strategy since it is considered an effective way of investigating what is happening, gaining new insights and familiarity about a situation (Saunders et al., 2009:139).

Moreover, it is vital to break the broad and vague problem into smaller and more precise issues, ultimately gaining some well-grounded insights on the work of NGOs in Malawi. An exploratory study did not only enable the researcher to establish the knowledge management practices being implemented by NGOs, but also revealed the extent to which these practices are being implemented. The influence of these practices on the knowledge management process was examined.

The drawbacks of exploratory research methods are that they only supply data, leaving its interpretation to the researcher, resulting in different researchers interpreting the same set of results differently. To mitigate this, a systematic comparison of the research findings with similar previous studies was carried out. Similar research in other parts of the world also adopted the exploratory research design (Safa et al., 2006:74; Lettieri et al., 2004:20; Matzkin, 2008:151). It was, therefore, important to adopt the same research design as these researchers to enable a comparison of results, as well as to ensure the validity of results (Saunders et al., 2009:273).

3.3.1 Research procedure

Exploratory research can either be qualitative, quantitative or a mixture of both methods (mixed approach). Qualitative research seeks an in depth understanding of a smaller but focused sample using unstructured data. On the other hand, quantitative research, which relies on deductive reasoning, systematically investigates phenomena using structured data on larger populations. Mixed methods combine both qualitative and quantitative forms (Creswell, 2009:4). The problems addressed in this research

call for identification of knowledge management practices in Malawian NGOs and an understanding of how much these practices are being implemented, therefore quantitative analysis was deemed the best approach (Creswell, 2009:18).

The research draws from the strength of quantitative data to test and validate already-constructed theories about how knowledge management practices influence the knowledge management process (Matzkin, 2008:157).

3.4 Sample frame and sampling method

The population of the study are employees and volunteers of NGOs in Malawi. The research sample was drawn from a list of NGOs compiled by the NGO board of Malawi, which is the registering and regulatory authority of NGOs in Malawi, in conjunction with the council for non-governmental organisations in Malawi (CONGOMA), which is a designated NGO-coordinating board in Malawi. This sampling frame ensured the coverage of a wide range of NGOs as all legally operating NGOs in Malawi are registered with these boards. The list consisted of 550 NGOs as of September 2013 (CONGOMA, 2013). The entire population of all NGOs in Malawi could not be covered due to financial and time constraints, therefore a sample was carefully chosen.

Sampling methods described by research practitioners include probability sampling techniques such as simple random, systematic random, stratified and multi-stage cluster; and non-probability sampling techniques such as convenience, snowball, quota, purposive and self-selection (Saunders et al., 2009:213). This research adopted a convenient sampling method by targeting NGOs that were easily accessible to the researcher through links with the United Nations (UN) as the availability of respondents to the researcher had to be taken into consideration and it was theorised that the researcher's links with these organisations would increase the response rate. Convenience sampling focuses on respondents that are easily accessible (Saunders et al., 2009:241).

Convenience sampling was used in conjunction with stratified random sampling, which works by separating samples into distinct categories based on their attributes. A

random sample is then drawn from each stratum (Saunders et al., 2009:228). The researcher first grouped the organisations by their geographical location, thus they were grouped into northern, central and southern regions of Malawi. The organisations were then further grouped by the sector in which they operate, for example health, civil rights and religion. The population of 300 sample organisations was then randomly selected from these smaller groups.

The underlying principle of the sampling techniques was to obtain information-rich cases with maximum variation and adequate representation of NGOs in all sectors of the economy and also coverage of NGOs in all the regions in Malawi. The target participants were volunteers and employees at all levels in these NGOs who were thought to be in the best position to give their views about the knowledge management practices and the organisational effectiveness of these practices.

Of the 300 organisations initially selected, only 247 were accessible to the researcher. The other 53 were not accessible either because the contact details obtained had changed since the last time the directory was updated, or the organisations had closed their operations in Malawi. A final sample of 487 participants from 247 NGOs was invited to participate in the survey. The sample was chosen with the target of getting a minimum of 30 responses, which is considered a good sample for research (Oates, 2006:100). A total of 103 usable responses were received from 45 NGOs, representing a response rate of 21.1%. This is considered a reasonable response rate, since self-administered questionnaires can attract response rates as low as 10% (Oates, 2006:99). The respondents covered the main areas of social development including health, education, social and economic development and represented all the regions in Malawi.

A majority of the non-respondents indicated that they were “too busy” to find time for completing the questionnaire, while some expressed no interest in the subject when the researcher went to collect the completed questionnaires on the agreed date. Rogelberg and Luong (1998:64) suggest the increasingly common method of comparing the responses of those who return the questionnaires quickly with those that are returned after a few follow-ups as a way of evaluating the non-response bias. These authors suggest that in some cases, late responses may, to some extent reflect

the kind of responses that non-respondents would have given. When implemented in the current research, this comparison did not, however, exhibit any significant differences, thus no significant characteristics of the non-respondents could be deduced, leading to the conclusion that their lack of response yielded no bias to the final sample.

3.5 Measurement

The research assesses nine aspects of knowledge management practices, namely awareness of knowledge management, knowledge management culture, knowledge management strategy, information technology for knowledge management, training and knowledge management, performance and knowledge management, knowledge management infrastructure, knowledge management holders and measuring knowledge management. These aspects were commonly identified by researchers for their influence on knowledge management initiatives in the non-profit sector (Safa et al., 2006:71; Hume et al., 2012:86; Vidović, 2010:9).

Measures were put in place for each of the above factors, drawing from the existing literature, where these measures have been used before and provided interesting insights about knowledge management practices in NGOs (Safa et al., 2006:78; Vidović, 2010:9). The measures were modified accordingly to suit the requirements of this research before being adopted. All the measures, except the definition of knowledge management, were based on a four-point Likert scale. A four-point Likert scale was used to ensure that respondents would weigh the merit of each response category and give an honest opinion rather than just taking the mid-point as an easy way out.

3.6 Data collection methods

A survey targeting various NGOs in Malawi was administered using a structured and self-administered questionnaire as an instrument of data collection. Surveys are the most popular strategy in information systems, as they are considered effective for evaluating systems and practices (Oates, 2006:102). The choice of a survey was influenced by the use of an exploratory quantitative approach, which is better served by a survey.

In addition, a survey was regarded as most effectively meeting the researcher's need to identify the knowledge management practices in Malawian NGOs, and the extent to which they are being implemented. Surveys lend themselves to the collection of extensive data from large populations, in a flexible and relatively less expensive manner (Oates, 2006:104). Given the time constraints, the researcher took advantage of this strength to study large numbers of NGOs, getting quick and precise numerical data, which could then be generalised. The gathered data was then quantitatively analysed to draw useful patterns and theoretical themes, which could possibly be generalised.

3.6.1 Questionnaire

The initial questionnaire was designed and developed using the results of the literature review, where measures used in previous researches were adopted (Safa et al., 2006:76–83; Vidović, 2010:9–10). Researchers suggest that the validity of research data can be established to a large extent if experts are allowed to comment or give suggestions on the structure and content of the questionnaire before its adoption (Saunders et al., 2009:362). The questionnaire for this study was validated by the research supervisor and pre-tested on colleagues, leading to its refining and improvement. The questionnaire was then piloted with two employees and two volunteers from non-governmental organisations to assess the length and clarity of the questionnaire. The feedback obtained from the pilot group was taken into consideration and reflected in the finalised questionnaire.

The final questionnaire comprised two parts, namely the demographic attributes of the respondents and the organisational components of the knowledge management practices. The second part of the questionnaire was divided into nine sections covering awareness of knowledge management, knowledge management culture, knowledge management strategy, information technology for knowledge management, training, performance, knowledge management infrastructure, knowledge management holders and measuring knowledge management. Except for the definition of knowledge management, the rest of the questions had pre-defined

answers, making it easy for the respondents to answer and easy for the researcher to analyse.

The questionnaire was used to establish the knowledge management practices in NGOs and to estimate the extent to which these practices were being implemented. Another aim of the questionnaire was to assess the performance of individuals in these organisations. A four-point Likert scale was used to ensure that respondents would weigh the merit of each response category and give an honest opinion rather than just taking the mid-point as an easy way out.

3.6.2 Data collection procedure

The questionnaire was self-administered, not only to enable the researcher to collect data from a large number of people, but also to allow the respondents to give honest answers without trying to impress the researcher. The questionnaire included an introductory note explaining the nature and purpose of the research and also the fact that participation was voluntary. A consent form on a UNISA letterhead was also attached to show the identity and institutional association of the researcher and supervisor and their contact details were provided. The researcher took advantage of her links with the United Nations (UN) to circulate questionnaires among various implementing partners of the UN since they were easily accessible. In addition, teams were put in place to distribute questionnaires to various NGOs across the country. This was deemed the best approach since the mailing system in Malawi is not very efficient and also given that Malawi is generally behind in terms of technology – a good number of the targeted participants would not have access to Internet and email.

Besides reducing the time it would take for questionnaires to reach the intended respondents, physical distribution of the questionnaires was favoured since it would give the researcher an opportunity to explain the purpose and expectations of the research project. This method, though expensive, was seen to improve the response rate as the respondents realised the importance placed on the research by the researcher. The appropriate time of collection of completed questionnaires was agreed to as the questionnaires were hand delivered. The distribution and collection of questionnaires was done between January and May 2014.

3.6.3 Ethical considerations

The research instruments were sent to the College of Science, Engineering and Technology's research and ethics committee for ethical guidance. After considering the research methodology and other relevant issues of the study, they approved the instruments as adhering to the code of ethical conduct and principles.

The autonomy of participants was protected through the use of an informed consent form, which specified the nature and purpose/s of the research, the identity and institutional association of the researcher and supervisor and the fact that participation was voluntary.

Throughout the research process, the participating individuals and organisations were protected. Although the names of organisations were provided in the questionnaires, names of respondents were not asked for. The consent forms required only the respondent's signature and were not linked to the collected data, thus reducing the chances of identification. Furthermore, the produced results do not name the NGOs, providing an assurance of confidentiality and anonymity to both organisations and individuals who participated.

3.6.4 Constraints

In a bid to capture as much information as possible, it turned out that the respondents felt that the questionnaire was too long and therefore time consuming. As a result, many potential participants opted out of the survey, reducing the response rate.

3.7 Reliability and validity

The data's validity and reliability is vital for a survey to provide sufficiently sound, consistent and relevant evidence.

Validity is concerned with the accuracy of measurement, and is mostly discussed in terms of the sample's ability to represent a population. Thus, the survey design has to ensure that questions asked measure what the research is supposed to be measuring. In the case of a survey, it is essential to ensure content validity; that the designed

questions reflect the issue under research, making sure that key related subjects are not excluded (Saunders et al., 2009:157). Secondly, internal validity is important: ensuring that the posed questions can really address the issues under research. Lastly, external validity is also crucial, thus ensuring as much as possible that results can be generalised to the target population represented by the survey sample (Saunders et al., 2009:158).

Reliability, on the other hand, is concerned with the consistency of the measurement instrument; that is, the degree to which the questions used in a survey elicit the same type of information each time they are used under the same conditions (Saunders et al., 2009:156; Leedy & Ormrod, 2010:29).

Although reliability and validity are related, they are not always aligned, thus it's possible to get results that are highly reliable but with low validity, or vice versa. Good research should, therefore, exhibit both reliable and valid research data (Leedy & Ormrod, 2010:29). It is seen from the above that these two attributes largely depend on the quality of the data collection instrument and therefore this study fundamentally deals with the concepts during the questionnaire design, sampling method and data collection procedure.

To ensure this, the questionnaire was, firstly, designed with closed-ended questions to control the response patterns and to make it easier for the respondents to complete the questionnaire. It has been observed that questions which require excessive judgement or which are difficult for respondents to answer may result in inappropriate answers or no answers at all, thus impacting the accuracy of the collected data (Oates, 2006:224; Saunders et al., 2009:375).

Secondly, researchers suggest that validity can be established to a large extent if experts are allowed to comment or give suggestions on the structure and content of the questionnaire before its adoption (Saunders et al., 2009:373). The questionnaire was validated by the research supervisor and pre-tested on colleagues, leading to its refining and improvement, thus ensuring content validity.

Thirdly, the measures for assessing the practices in NGOs were drawn from existing literature, where these measures have been used before and provided interesting insights about knowledge management practices in NGOs. This ensured internal validity of the data collected.

Fourth, the stratified random sampling method was used to purposefully select the sample, ensuring adequate representation of NGOs in all sectors of the economy, NGOs of different sizes and also to include a wider geographical selection covering all the regions in Malawi. The method therefore ensured a sample that is a true representative of the population; hence the results can be generalised to the target population represented by the survey sample. This ensured external validity.

Lastly, the questionnaire was self-administered, not only ensuring consistency in the way the research instrument was administered, but also giving potential anonymity to the respondents, leading to more truthful or 'valid' responses. The fact that self-administered questionnaires are less intrusive gives participants the freedom to give honest answers without trying to please the researcher. This helps to ensure the reliability of data collected.

3.8 Data analysis

The survey presented respondents with a list of nine knowledge management success factors to assess. The final sample of 103 was checked to see if the data for knowledge management practices were properly completed. Less than 6% of the cases had parts of the data missing for a few of the indicators; however, these cases were retained with mean value substitution as the missing data was random and these cases had sufficient usable data. The data collected was used to assign grades on a four-point Likert-type scale as in Table 3.1.

Table 3.1: Grades assigned on a Likert-type scale

4	**3**	**2**	**1**
Strongly agree	Agree	Disagree	Strongly disagree
Very good	Good	Poor	Very poor
Always	Sometimes	Rarely	Never
Very easy	Easy	Difficult	Very difficult
75%–100%	50%–74%	25%–49%	0%–24%

The data analysis essentially comprised the following steps:

1. Analysis of descriptive statistics to determine the knowledge management practices in Malawian NGOs and the extent to which these practices are being adhered to.
2. One-way ANOVA testing to examine any significant differences on practices of respondents among different categories.
3. A Spearman's rank correlation coefficient analysis was done to determine the effect of knowledge management practices on the performance of individuals.

These steps are discussed in more detail in subsections 3.8.1, 3.8.2 and 3.8.3.

3.8.1 Analysis of descriptive statistics

Exploratory and confirmatory factor analyses were performed using Microsoft Excel and SPSS to check the normality of the data and to calculate reliability, correlation and other descriptive statistics. All the variables under consideration have multiple indicators.

Each factor was assessed based on the data provided by the participating individuals on varying numbers of indicators per factor. Descriptive statistics (frequencies and percentages and means) were computed for demographic attributes, awareness of knowledge management, knowledge management culture, knowledge management strategy, information technology for knowledge management, training and knowledge management, performance and knowledge management, knowledge management infrastructure, knowledge management holders and measuring knowledge management, using multiple indicators for each variable. Distinct rules were then used to assign overall grades for each factor based on the number and/or combination of positive/negative indicators. This process assisted to determine the most common practices and the extent to which they are being followed through.

3.8.2 Analysis of variance

ANOVA is a popular test for examining differences between three or more categories of participants (Saunders et al., 2009:451). This test can answer questions of comparative nature, therefore it was used to test the influence on knowledge

management practices of the economic sectors in which the NGOs operate. The awareness of knowledge management, knowledge management culture, knowledge management strategy, information technology for knowledge management, training and knowledge management, performance and knowledge management, knowledge management infrastructure, knowledge management holders and measuring knowledge management were analysed for each sector represented by the respondents**.** After ANOVA was conducted**,** post-hoc tests were used to determine which sectors differ significantly in terms of their practices. An analysis of the findings was done to investigate the possible existence of dominant patterns of knowledge management practices among the sectors.

The author was also interested to learn if the knowledge management culture changes depending on the length of one's stay with the organisation and if the satisfaction with the information technology tools varies with each age group. ANOVA and post-hoc tests were used to identify significant differences among the categories. Other analysis tools such as tables, bar charts and scatter plots were used to illustrate the major features and the distribution of the data.

3.8.3 Spearman's rank coefficient correlation analysis

To establish the correlation between elements of knowledge management, Spearman's rank correlation coefficient test was used. Spearman's rank correlation coefficient was chosen for its ability to assess the strength of a relationship between two categorical variables (Saunders et al., 2009:451). Furthermore, Spearman's rank correlation coefficient was used to allow for a systematic comparison of the research findings with similar research in other parts of the world where it was used (Safa et al., 2006:75; Vidović, 2010:15). The strength of the relationships among awareness of knowledge management, knowledge management culture, knowledge management strategy, information technology for knowledge management, training and knowledge management, individual performance and knowledge management, knowledge management infrastructure, knowledge management holders and measuring knowledge management were analysed and conclusions were drawn.

3.9 Chapter summary

The research adopted a positivist philosophy to address the research questions. This was coupled with the deductive approach to fully meet the research objectives by enabling explanation of causal relationships. The exploratory survey collected quantitative data from NGOs in Malawi using a structured questionnaire. The research sample was purposefully selected to obtain information-rich cases, with maximum variation and adequate representation of NGOs in all sectors of the economy and also coverage of NGOs in all the regions in Malawi. Data was gathered using a thoroughly designed and pre-tested questionnaire, enabling collection of highly valid and reliable data. The gathered data was then quantitatively analysed with the assistance of tools such as SPSS to gain insights and observe patterns from the data, thereby addressing the research questions.

The methodology described in this chapter provides a baseline for data gathering. The following chapter presents the findings of the survey relating to the research questions and the analysis of data.

CHAPTER 4: RESULTS

A survey was conducted to evaluate the quality of knowledge management practices and success factors in Malawian NGOs and how these practices influence the knowledge management process. Respondents were presented with a list of criterion to assess the knowledge management practices in Malawian NGOs. Several measures were used to assess the progress of each of the selected knowledge management success factors. The measures used were drawn from existing literature where similar indicators were engaged and revealed interesting insights on knowledge management practices (Safa et al., 2006:76–83; Vidović, 2010:9–10). Respondents were requested to pick an answer that closely suited their opinion on a four-point Likert scale.

This section presents the findings of the survey, firstly by displaying the demographic attributes of the respondents. This is followed by summaries of frequencies and percentages of indicators for each attribute. Results of the ANOVA analysis of the practices to determine differences among selected categories are then presented. Finally, the results of a correlation analysis between the practices are outlined.

4.1 Demographic attributes

A summary of the demographic attributes of the participants is shown in Table 4.1. Of those who participated in the survey, almost two thirds (64; 62.1%) were male and only one respondent did not disclose their gender. About a third of the respondents were between the ages of 31 and 39 years (35; 34%) and the greatest proportion of the research population had at least an undergraduate degree (64; 62.1%).

The survey respondents composed of employees and volunteers from different departments within their organisations, with almost a quarter each from the program department (25; 24.3%) and finance department (20; 19.4%), respectively. These are important departments in this survey, since they are mainly responsible for implementing and monitoring the social projects and budgetary issues, which are directly involved in knowledge management initiatives.

The main areas of social development, including health (27; 26.2%) and human rights (25; 24.3%), were well represented. Most of the respondents who selected ‘other’ did

not specify the sector in which their NGOs operate. A few who specified indicated that their organisations focus on areas such as supporting the disabled and networking. Those under 'unknown' did not complete the question about the focus area of their organisation. Of those who participated, more than half (56; 54.4 %) had worked with their organisations for less than three years.

A significant number of respondents (41; 39.8%) did not provide details about the objectives of their organisations. Nevertheless, a majority of those who responded to the question are from organisations whose objectives are to empower the poor and marginalised for a dignified livelihood (19; 18.4%) and health care improvement (10; 9.7%). Those recorded under 'other' objectives include food security, clinical research, encouraging commitment to faith and advocating for civil rights. Furthermore, a good number of these organisations target the poor and marginalised communities (24; 23.3%) as well as women and children (14; 13.6%). A majority (27; 26.2%) of these organisations target both rural and urban communities of Malawi.

Table 4.1: Demographic attributes of the respondents

Gender			**Level of education**		
	Freq.*	**Perc.**		**Freq.**	**Perc.**
Female	38	36.9	MSCE	7	6.8
Male	64	62.1	Diploma	30	29.1
Unknown	1	1	Undergraduate	37	35.9
			Postgraduate	27	26.2
			Unknown	2	1.9
Age			**Years of experience in the organisation**		
	Freq.	**Perc.**		**Freq.**	**Perc.**
25 Years and below	15	14.6	Less than 3 Years	56	54.4
26–30 Years	26	25.2	3–5 Years	25	24.3
31–39 Years	35	34	6–8 Years	7	6.8
40–49 Years	20	19.4	More than 8 Years	8	7.8
50 Years and above	6	5.8	Unknown	7	6.8
Unknown	1	1			
Distribution of departments			**Organisation's main focus area**		
	Freq.	**Perc.**		**Freq.**	**Perc.**
Program	25	24.3	Health	27	26.2
Finance	20	19.4	Human rights	25	24.3
Administration	19	18.4	Agriculture	5	4.9
Health education	8	7.8	Religion	4	3.9
Human resources	3	2.9	Arts, culture and humanities	3	2.9
Counselling	2	1.9	Civil rights	3	2.9
Management information systems	1	1	Environment and animals	3	2.9
Other	15	14.6	Education and research	1	1
Unknown	10	9.7	Other	20	19.4
			Unknown	12	11.7
Objectives of organisation			**Targeted beneficiaries**		
	Freq.	**Perc.**		**Freq.**	**Perc.**
Empowering the poor for dignified livelihoods	19	18.4	Poor and marginalised communities	24	23.3
Health care improvement	10	9.7	Women and children	14	13.6
Upholding human rights	8	7.8	Disabled and vulnerable	7	6.8
Youth development	6	5.8	Youth	6	5.8
Improving access to safe water	5	4.9	Unknown	52	50.5
Supporting rights of the disabled	5	4.9	**Location**		
Promoting gender balance	4	3.9	Rural communities	15	14.6
Other	3	2.9	Urban communities	9	8.7
Unknown	41	39.8	Rural and urban communities	27	26.2
			Unknown	52	50.5

** KEY: Freq. = Frequency*
Perc. = Percentage

4.2 Awareness of knowledge management

The survey began by establishing the levels of awareness of knowledge management issues among employees and volunteers in Malawian NGOs. The findings are as presented in Table 4.2.

It is important to note that in this and other subsequent tables, the percentages are calculated using only those respondents who actually answered the question. Missing values are not included; thus, the total Freq. is not always equal to the total number of respondents who completed questionnaires.

More than half (54; 55.7%) of the employees and volunteers surveyed "agree", while barely less than one third (30; 30.9%) "strongly agree" that they are familiar with the concept of knowledge management. The striking irony, however, is that when asked to give their definition of knowledge management, less than half (46; 44.7%) attempted to define it. The provided definitions were grouped as shown in Table 4.3 below. It was found that 19 (18.4%) of the respondents defined knowledge management as acquiring, sharing and utilising knowledge. A majority of definitions in this category included, verbatim, that knowledge management involves acquiring, sharing and utilising knowledge. One participant defined knowledge management as "Institutionalisation of knowledge in an organisation for performance, improvement, innovation, change process, reference and decision making", while another defined it as "The use of acquired knowledge to make effective decisions". In addition, 17 (16.5%) of the respondents defined knowledge management as being similar to "information management". Definitions such as "Gathering, managing and improving information which is advantageous for the organisation's competitiveness" and "Collective use of information" were found in this category.

Five participants (4.9%) equated knowledge management to the management of ideas, skills and abilities, while four (3.9%) defined it as utilising lessons learnt. Perhaps the most interesting definitions are the ones where knowledge management was defined as "documentation in order to assist meeting organisational objectives" and "knowing and keeping what you don't know".

Findings suggest strong application of knowledge, with about two thirds (69, 67%) of the respondents reporting that knowledge is "always" applied to improve and innovate in their organisations. Despite this assertion, it is surprising that almost two thirds (59; 61.4%) of the employees and volunteers who participated in the survey either "agree" or "strongly agree" that knowledge management practices are a responsibility of managers and executives in their organisations. This raises an important question about how the organisations succeed in ensuring that all employees responsibly apply knowledge to improve and innovate if they believe it is management's business. It is interesting to notice that almost half of the participants either "strongly agree" (48; 46.6%) or "agree" (49; 47.6%) that they consider email and Intranet to be knowledge transfer- and storing mechanisms.

Based on the above findings, NGOs in Malawi exhibit low- to medium levels of awareness on knowledge management issues.

Table 4.2: Awareness of knowledge management

Indicator	Strongly agree		Agree		Disagree		Strongly disagree		Total	
	Freq.*	Perc.	Freq.	Perc.	Freq.	Perc.	Freq.	Perc.	Freq.	Perc.
Knowledge management practices are a responsibility of the managers and executives.	20	20.8	39	40.6	17	17.7	20	20.8	**96**	**100**
I consider email and Intranet to work as knowledge transfer and storing places.	48	46.6	49	47.6	6	5.8	0	0	**103**	**100**
I am familiar with the concept of knowledge management.	30	30.9	54	55.7	9	9.3	4	4.1	**97**	**100**
	Always		**Sometimes**		**Rarely**		**Never**		**Total**	
	Freq.	**Perc.**	**Freq.**	**Perc.**	**Freq.**	**Perc.**	**Freq.**	**Perc.**	**Freq.**	**Perc.**
Knowledge is applied to improve and innovate.	69	67	32	31.1	2	1.9	0	0	**103**	**100**

** KEY: Freq. = Frequency*
Perc. = Percentage

Table 4.3: Definition of knowledge management

	Freq.*	Perc.
No answer.	57	55.3
Acquiring, sharing and utilising knowledge.	19	18.4
Information management.	17	16.5
Ideas, skills and abilities management.	5	4.9
Utilising lessons learnt.	4	3.9
Documentation.	1	0.9
Other.	1	0.9

** KEY: Freq. = Frequency*
Perc. = Percentage

4.3 Knowledge management culture

The knowledge management culture of organisations was measured by assessing a few typical implicit cultural practices. The components included are shown in Table 4.4 below where an overview of the findings is given.

It is visible from the findings that the culture of recording and sharing knowledge dominates most of Malawian NGOs, since an overwhelming majority (97; 94.2%) of the respondents either "agree" or "strongly agree" that recording and sharing of knowledge is a routine like any other daily work for employees. More than half (52; 51.5%) of the surveyed employees and volunteers "strongly agree" that knowledge sharing is seen as a strength in their organisations. Moreover, a lion's share (100; 97.1%) of the respondents either "agree" or "strongly agree" that management in their organisations encourage employees to capture experiences and lessons learnt, a key factor in managing the explicit knowledge. The efforts by management seem to encourage knowledge generation, as nearly half of the participants assert that their organisations have employees who either "always" (43; 41.7%) or "sometimes" (45; 43.7%) initiate generation of new knowledge.

Although nearly half of the participants either "strongly agree" (47; 46.1%) or "agree" (45; 44.1%) that knowledge sharing behaviour, like sharing and re-using, is actively promoted by top level management and the absence of a culture to visibly reward individuals for sharing knowledge is quite predominant. Almost half (49; 48%) of the surveyed employees and volunteers "disagree" that individuals are visibly rewarded for sharing knowledge. This is also manifested in the significant lack of incentives, as only half (51; 50%) of the participants either "agree" or "strongly agree" that management motivates staff to share knowledge by giving incentives.

On the other hand, an overwhelming majority of the participants either "agree" or "strongly agree" that management motivate staff to share knowledge by building trust (96; 94.1%) and by making available time and resources for such (91; 89.2%). Furthermore, a vast majority of the participants either "agree" or "strongly agree" that their organisations have open communication among employees (89; 88.1%), and that

their organisations nurture trust among employees (84; 84%). Similarly, a large majority (85; 85%) of the surveyed employees and volunteers either "agree" or "strongly agree" that there is good intra-team communication and sharing of knowledge in their organisations.

Findings also exhibit commendable efforts by employees to share knowledge as almost two thirds (67; 65.7%) of the employees and volunteers surveyed assert that their organisations have employees who "sometimes" share knowledge, while almost a third (30; 29.4%) "always" share knowledge. Moreover, almost half (50; 48.5%) of the respondents report that their organisations have employees who "sometimes" dedicate their time to converse with colleagues, while almost a third (34; 33%) of the participants "always" dedicate time to converse with colleagues. Perhaps these efforts precipitate innovativeness, as a huge majority (86; 86%) of the respondents either "agree" or "strongly agree" that their organisations are innovative.

Vast majorities of the participants proclaim that their organisations have employees who either "always" or "sometimes" consult their colleagues (98; 95.1%) and who either "always" or "sometimes" admit their lack of knowledge (72; 69.9%). Cooperative and helpful attitudes were also reported, with a huge majority (89; 87.5%) of the participants either indicating "agree" or "strongly agree" that employees are cooperative and helpful when asked for information or advice. It is clear that this can help employees to learn from each other, as an overwhelming majority (96; 95%) of the participants either "agree" or "strongly agree" that in their organisations, colleagues learn from each other.

Furthermore, more than three quarters (81; 81%) of the employees and volunteers surveyed either "agree" or "strongly agree" that employees are stimulated to acquire or generate new knowledge. In contrast to this, more than half (56; 56%) of the surveyed employees and volunteers either "disagree" or "strongly disagree" that their organisations have specific places intended for informal socialisation of employees during working hours. Drawing from the above, one can conclude that, although the NGOs in Malawi pursue a considerable amount of knowledge-oriented practices, they still lack critical aspects, such as capturing of tacit knowledge, which is essential in drawing value out of the knowledge these organisations possess.

Table 4.4: Knowledge management culture

Indicator	Strongly agree		Agree		Disagree		Strongly disagree		Total	
	Freq.*	Perc.	Freq.	Perc.	Freq.	Perc.	Freq.	Perc.	Freq.	Perc.
Recording and sharing of knowledge is a routine like any other daily work for employees.	53	51.5	44	42.7	6	5.8	0	0	**103**	**100**
Employees are cooperative and helpful when asked for information or advice.	29	28.2	60	58.3	14	13.6	0	0	**103**	**100**
Knowledge sharing is seen as a strength in our organisation.	52	51.5	40	39.6	7	6.9	2	2	**101**	**100**
There is good intra-team communication and sharing of knowledge.	25	25	60	60	11	11	4	4	**100**	**100**
Knowledge sharing behaviour, like sharing and re-using knowledge is actively promoted by top-level management.	47	46.1	45	44.1	7	6.9	3	2.9	**102**	**100**
Individuals are visibly rewarded for sharing knowledge.	10	9.8	36	35.3	49	48	7	6.9	**102**	**100**
Employees are stimulated to acquire or generate new knowledge.	24	24	57	57	16	16	3	3	**100**	**100**
In our organisation, colleagues learn from each other.	29	28.7	67	66.3	5	5	0	0	**101**	**100**
Management encourages employees to capture experiences and lessons learnt.	56	54.4	44	42.7	3	2.9	0	0	**103**	**100**
Management motivates staff to share knowledge by building trust.	48	47.1	48	47.1	4	3.9	2	2	**102**	**100**
Management motivates staff to share knowledge by giving incentives.	23	22.5	28	27.5	42	41.2	9	8.8	**102**	**100**
Management motivates staff to share knowledge by making available time and resources for such.	29	28.4	62	60.8	9	8.8	2	2	**102**	**100**
Our organisation has a specific place intended for informal socialisation of employees during working hours.	9	9	35	35	45	45	11	11	**100**	**100**
How would you rate the level to which your organisation: • Has open communication among employees?	38	37.6	51	50.5	9	8.9	3	3	**101**	**100**
• Nurtures trust among employees?	24	24	60	60	9	9	7	7	**100**	**100**
• Is innovative?	31	31	55	55	11	11	3	3	**100**	**100**
	Always		**Sometimes**		**Rarely**		**Never**		**Total**	
How would you rate the level to which your organisation:	**Freq.**	**Perc.**	**Freq.**	**Perc.**	**Freq.**	**Perc.**	**Freq.**	**Perc.**	**Freq.**	**Perc.**
• Has employees that share knowledge?	30	29.4	67	65.7	5	4.9	0	0	**102**	**100**
• Has employees that admit their lack of knowledge?	19	18.4	53	51.5	29	28.2	2	1.9	**103**	**100**
• Has employees that initiate generation of new knowledge?	43	41.7	45	43.7	15	14.6	0	0	**103**	**100**
• Has employees that consult their colleagues?	40	38.8	58	56.3	5	4.9	0	0	**103**	**100**
• Has employees that dedicate their time to converse with colleagues?	34	33	50	48.5	17	16.5	2	1.9	**103**	**100**

** KEY: Freq. = Frequency*
Perc. = Percentage

4.4 Knowledge management strategy

The knowledge management strategies in Malawian NGOs were evaluated and the findings are represented in Table 4.5 below.

More than half (58; 56.3%) of the employees and volunteers surveyed either "agree" or "strongly agree" that there is a clear vision of how knowledge management is to be used in daily office undertakings. This leaves a significant more than one third (45; 43.7%) with no clear vision on how knowledge management is to be used in daily office undertakings. On the contrary, almost two thirds (67; 65.1%) of the participants either "agree" or "strongly agree" that their organisations have systematic approaches to make use of knowledge in their daily work. One would expect the opposite, since, where there is no clear vision, knowledge management practices are adopted in an ad hoc manner, hence, no systematic approach to the use of knowledge.

On a positive note, it is impressive to notice that almost two thirds (62; 60.8%) of the respondents "strongly agree" that top management recognise knowledge as an important part of the organisational strategy. Furthermore, an overwhelming majority (92; 89.3%) of the respondents either "agree" or "strongly agree" that knowledge sharing across departmental boundaries is actively encouraged. It appears NGOs in Malawi are cognisant of the need to continuously improve their knowledge management capabilities, as more than a third of the participants assert that their organisations either "always" (40; 39.6%) or "sometimes" (39; 38.6%) sharpen their skills for acquiring, generating and applying knowledge. When asked about the knowledge development strategy, more than three quarters (79; 77.5%) of the participants either "agree" or "strongly agree" that their organisations have clear strategies for knowledge development through research and acquisition.

More than two thirds (72; 69.9%) of the respondents either "agree" or "strongly agree" that organisations have clear strategies for storing knowledge assets. When asked whether everyone in the organisation will respond with the same answer if asked about the organisation's expertise, almost two thirds (65; 63.1%) of the employees and volunteers surveyed either indicated "agree" or "strongly agree",

leaving a significant more than a third (38; 36.9%) who either “disagree” or “strongly disagree”. This poses the need to raise awareness of the available knowledge.

While the strategies in Malawian NGOs strongly support the knowledge generation process through recognising knowledge as an important part of the organisational strategy, encouraging its sharing across departments and developing through research and acquisition, the knowledge application process is weakly supported as evidenced by the lack of clear vision on how organisations are to use knowledge management. One can then conclude that the strategy leans more towards generation of knowledge than its application.

Table 4.5: Knowledge management strategy

Indicator	Strongly agree		Agree		Disagree		Strongly disagree		Total	
	Freq.*	Perc.	Freq.	Perc.	Freq.	Perc.	Freq.	Perc.	Freq.	Perc.
Top management recognises knowledge management as an important part of the organisational strategy.	62	60.8	33	32.4	7	6.9	0	0	**102**	**100**
Our organisation has a clear strategy for storing knowledge assets.	29	28.2	43	41.7	31	30.1	0	0	**103**	**100**
There is a clear vision of how knowledge management is to be used in daily office undertakings.	23	22.3	35	34	45	43.7	0	0	**103**	**100**
Knowledge sharing across departmental boundaries is actively encouraged.	41	39.8	51	49.5	11	10.7	0	0	**103**	**100**
Everyone in our organisation will respond with the same answer if asked about the organisation's expertise.	28	27.2	37	35.9	32	31.1	6	5.8	**103**	**100**
The organisation has a clear strategy for knowledge development through research and acquisition (e.g. recruitment).	33	32.4	46	45.1	18	17.6	5	4.9	**102**	**100**
The organisation has a systematic approach to make use of knowledge in daily work.	21	20.4	46	44.7	36	35	0	0	**103**	**100**
	Always		**Sometimes**		**Rarely**		**Never**		**Total**	
	Freq.	**Perc.**	**Freq.**	**Perc.**	**Freq.**	**Perc.**	**Freq.**	**Perc.**	**Freq.**	**Perc.**
The organisation hones (sharpens) its skills for acquiring, generating and applying knowledge.	40	39.6	39	38.6	22	21.8	0	0	**101**	**100**

** KEY: Freq. = Frequency*
Perc. = Percentage

4.5 Information technology for managing knowledge

The survey also explored the use of IT tools for knowledge management. A summary of the findings is given in Table 4.6.

The findings report that more than half (61; 59.2%) of the employees and volunteers surveyed report that their organisations "always" use technology to enhance service. Furthermore, an overwhelming majority (90; 88.2%) of the participants either "agree" or "strongly agree" that their organisations have systems that make use of the available knowledge easier. It can, therefore, be concluded that the utilisation of IT tools precipitates the overwhelmingly high usage of systems for knowledge management (Okumus, 2013:64). Nearly half of the participants affirm that accomplished tasks are "always" (47; 45.6%) or "sometimes" (47; 45.6%) documented well. Considering that Malawi's presence on the Internet is one of the lowest in the world (4.5%) (Sharra, 2012), the observation that almost two thirds (62; 61.4%) of the respondents have more than 75% of employees in their organisations accessing Internet and electronic mail is auspicious to the success of knowledge management initiatives.

Nearly three quarters (77; 74.7%) of the employees and volunteers surveyed either "agree" or "strongly agree" that their organisations have systems where employees can easily find the knowledge they need. In addition, nearly three quarters (73; 70.9%) of the participants either "agree" or "strongly agree" that their organisations have the right systems to capture and share new ideas and experiences. Similarly, 71 (70.3%) participants report that there is awareness of appropriate knowledge storage systems in their organisations.

When asked about specific software, participants either "agreed" or "strongly agreed" that, their organisations have software specifically intended for: document management (72; 71.2%), managing expert knowledge (63; 62.3%) and communicating information within the organisation (60; 59.4%). In addition, more than half (54; 53.5%) either "agreed" or "strongly agreed" that their organisations have software for knowledge management. Furthermore, more than half (59; 62.2%)

of the respondents perceive the quality of updating information in the software for document management to be either “good” or “very good”.

When asked how easy it is to find required and correct information in a day-to-day environment, almost three quarters (76; 73.8%) of the participants reported that it is “easy”, while only a few found it either “very easy” (13; 12.6%) or “difficult” (14; 13.6%). On the other hand, more than half (52; 50.5%) of the respondents report that their organisations “sometimes” experience problems of efforts being duplicated.

Another obstructive issue is the notable unavailability of yellow pages for employees. More than three quarters (79; 79.8%) of the participants either “disagree” or “strongly disagree” that their organisations have yellow pages for employees. In addition, more than half (52; 64.2%) of the respondents report that their organisations have less than 25% of their employees included in the yellow pages. Almost half (38; 49.4%) of the respondents however, feel that 50% or more of the employees should be included in yellow pages.

It can be seen that NGOs are making efforts in embracing technology, which is key to the success of their knowledge management initiatives. However, they still lag behind in some key areas such as effective use of technological tools to eliminate duplication of efforts and accessing knowledge mapping systems.

Table 4.6: Information technology for managing knowledge

Indicator	Strongly agree		Agree		Disagree		Strongly disagree		Total	
	Freq.*	Perc.	Freq.	Perc.	Freq.	Perc.	Freq.	Perc.	Freq.	Perc.
Our organisation has systems that make the use of available knowledge easier.	31	30.4	59	57.8	10	9.8	2	2	**102**	**100**
In our organisation there is awareness of appropriate knowledge storage systems.	18	17.8	53	52.5	26	25.7	4	4	**101**	**100**
Our organisation has the right systems to capture and share new ideas and experiences.	25	24.3	48	46.6	28	27.2	2	1.9	**103**	**100**
Our organisation has systems where employees can easily find the knowledge they need.	26	25.2	51	49.5	24	23.3	2	1.9	**103**	**100**
Our organisation has software for knowledge management.	12	11.9	42	41.6	35	34.7	12	11.9	**101**	**100**
Our organisation has software specifically intended for: • Communicating information within the organisation.	28	27.7	32	31.7	31	30.7	10	9.9	**101**	**100**
• Document management.	26	25.7	46	45.5	27	26.7	2	2	**101**	**100**
• Managing expert knowledge.	26	25.7	37	36.6	32	31.7	6	5.9	**101**	**100**
Our organisation has yellow pages for employees.	7	7.1	13	13.1	65	65.7	14	14.1	**99**	**100**
	Always		**Sometimes**		**Rarely**		**Never**		**Total**	
	Freq.	**Perc.**	**Freq.**	**Perc.**	**Freq.**	**Perc.**	**Freq.**	**Perc.**	**Freq.**	**Perc.**
Our organisation uses technology to enhance service.	61	59.2	36	35	6	5.8	0	0	**103**	**100**
Our organisation experiences problems of efforts being duplicated.	5	4.9	52	50.5	46	44.7	0	0	**103**	**100**
Accomplished tasks are documented well.	47	45.6	47	45.6	7	6.8	2	1.9	**103**	**100**
	Very easy		**Easy**		**Difficult**		**Very difficult**		**Total**	
	Freq.	**Perc.**	**Freq.**	**Perc.**	**Freq.**	**Perc.**	**Freq.**	**Perc.**	**Freq.**	**Perc.**
How easy is it to find required and correct information in a day-to-day environment?	13	12.6	76	73.8	14	13.6	0	0	**103**	**100**
	Very good		**Good**		**Poor**		**Very poor**		**Total**	
	Freq.	**Perc.**	**Freq.**	**Perc.**	**Freq.**	**Perc.**	**Freq.**	**Perc.**	**Freq.**	**Perc.**
How do you rate the quality of updating information in the software for document management?	20	21.1	39	41.1	21	22.1	15	15.8	**95**	**100**
	75%–100%		**50%–74%**		**25%–49%**		**0%–24%**		**Total**	
	Freq.	**Perc.**	**Freq.**	**Perc.**	**Freq.**	**Perc.**	**Freq.**	**Perc.**	**Freq.**	**Perc.**
What is the percentage of employees included in yellow pages?	13	16	12	14.8	4	4.9	52	64.2	**81**	**100**
What is the percentage of employees that should be included in yellow pages?	21	27.3	17	22.1	13	16.9	26	33.8	**77**	**100**
What is the percentage of employees that have access to Internet and electronic mail?	62	61.4	34	33.7	3	3	2	2	**101**	**100**

** KEY: Freq. = Frequency*
Perc. = Percentage

4.6 Training and knowledge management

The training culture of NGOs in Malawi was assessed and measured. The study yielded a broad perspective on issues related to formal training and knowledge transfer. An overview of the results is shown in Table 4.7.

The findings indicate that an overwhelming majority (93; 91.2 %) of the surveyed employees and volunteers either "agree" or "strongly agree" that individuals in their organisations are committed to continuous improvement. Nevertheless, a notable number (44; 43.6%) of respondents either "disagree" or "strongly disagree" that their organisations encourage employees to continue education by providing funding. It thus can be concluded that NGOs in Malawi seem to focus more on internal capacity-building programmes as opposed to external programmes which require individual sponsorship, as nearly half of the participants either "strongly agree" (43; 42.2%) or "agree" (44; 43.1%) that there are capacity-building programmes in their organisations.

Furthermore, need still remains for more training related to knowledge management practices, given that at the moment almost one third (33; 32.3%) of the organisations do not provide such training. The comforting prospect is the overwhelming number (95; 93.2%) of respondents who either "agree" or "strongly agree" that their organisations encourage experienced workers to transfer their knowledge to new or less experienced workers. Additionally, nearly three quarters (73; 73.7%) of respondents either "agree" or "strongly agree" that employees in their organisations share knowledge by preparing written documents such as training manuals and daily procedures. A vast majority (82; 81.2%) of participants either "agree" or "strongly agree" that there is constant flow or generation of new ideas in their organisation.

It is visible from the findings that both individuals and organisations are committed to continuous improvement and transfer of knowledge. However, organisations still lag in financially supporting the educational development of employees.

Table 4.7: Training and knowledge management

Indicator	Strongly agree		Agree		Disagree		Strongly disagree		Total	
	Freq.*	Perc.	Freq.	Perc.	Freq.	Perc.	Freq.	Perc.	Freq.	Perc.
Individuals in our organisation are committed to continue improving themselves.	43	42.2	50	49	9	8.8	0	0	**102**	**100**
There is a constant flow or generation of new ideas in our organisation.	30	29.7	52	51.5	19	18.8	0	0	**101**	**100**
There are capacity building programmes in our organisation.	43	42.2	44	43.1	15	14.7	0	0	**102**	**100**
Our organisation provides training related to knowledge management practices.	30	29.4	39	38.2	29	28.4	4	3.9	**102**	**100**
Our organisation encourages employees to continue their education by providing funding.	31	30.7	26	25.7	34	33.7	10	9.9	**101**	**100**
Our organisation encourages experienced workers to transfer their knowledge to new or less experienced workers.	42	41.2	53	52	4	3.9	3	2.9	**102**	**100**
Employees share knowledge by preparing written documents such as training manuals and daily procedures.	34	34.3	39	39.4	26	26.3	0	0	**99**	**100**

** KEY: Freq. = Frequency*
Perc. = Percentage

4.7 Individual performance and knowledge management

The survey was also used to assess the individual performance of employees and details of the findings are presented in Table 4.8.

It is notable that although nearly two thirds (66; 64.7%) of the surveyed employees and volunteers "strongly agree" that they like to share ideas and experiences with others, a significant number (42; 41.2%) either "disagree" or "strongly disagree" that they prefer to use other people's ideas and suggestions, instead of figuring things out for themselves, meaning that there is a 23.5% disparity between those who share ideas and those who are willing to have ideas shared with them.

On the other hand, all respondents (102; 100%) either "agree" or "strongly agree" that they are flexible in applying other people's knowledge in order to become more efficient and effective. More than half (54; 52.9%) of the respondents "strongly agree" that by sharing knowledge they have made some significant contribution to their organisations. More so, a majority of nearly two thirds (64; 62.7%) of the respondents report that they "sometimes" effectively develop new knowledge, while nearly a third (31; 30.4%) always effectively develop new knowledge. The effectiveness of knowledge is reliant on its use; hence its value to the organisation may not be realised if it is not used. Thus, the interest to contribute to the corporate knowledge base as professed by nearly half who either "strongly agree" (47; 47.5%) or "agree" (48; 48.5%) that they like to make contributions to the corporate knowledge base will be in vain if the knowledge is not applied. A huge majority (85; 85.9%) of the participants either "agree" or "strongly agree" that they often ask themselves which knowledge they need to perform their tasks.

Overall, employees in Malawian NGOs are developing new knowledge and sharing it. However, the application of the acquired knowledge remains low. Most worryingly, the gap between those who are willing to teach and those who are unwilling to learn poses a major problem for knowledge management implementation, individual performance and organisational success.

Table 4.8: Individual performance and knowledge management

Indicator	Strongly agree		Agree		Disagree		Strongly disagree		Total	
	Freq.*	Perc.	Freq.	Perc.	Freq.	Perc.	Freq.	Perc.	Freq.	Perc.
I often ask myself which knowledge I need to perform my current tasks.	46	46.5	39	39.4	14	14.1	0	0	**99**	**100**
I like to make my contribution to the corporate knowledge base.	47	47.5	48	48.5	4	4	0	0	**99**	**100**
I like to share my ideas and experiences with others.	66	64.7	36	35.3	0	0	0	0	**102**	**100**
By sharing my knowledge I have made a significant contribution to my organisation.	54	52.9	45	44.1	3	2.9	0	0	**102**	**100**
I am flexible in applying other people's knowledge in order to become more efficient and effective.	63	61.8	39	38.2	0	0	0	0	**102**	**100**
I prefer to use other people's ideas and suggestions, instead of figuring it out myself.	20	19.6	40	39.2	32	31.4	10	9.8	**102**	**100**
	Always		**Sometimes**		**Rarely**		**Never**		**Total**	
	Freq.	**Perc.**	**Freq.**	**Perc.**	**Freq.**	**Perc.**	**Freq.**	**Perc.**	**Freq.**	**Perc.**
I effectively develop new knowledge.	31	30.4	64	62.7	7	6.9	0	0	**102**	**100**

** KEY: Freq. = Frequency*
Perc. = Percentage

4.8 Knowledge management infrastructure

The infrastructure for knowledge management was assessed and the findings are summarised in Table 4.9.

Results exhibit an evidently strong culture of identifying lessons learnt, where more than a third (39; 39.4%) of the surveyed employees and volunteers report that their organisations "always" have a practice of identifying lessons after completion of projects, while almost half (46; 46.5%) "sometimes" identify lessons learnt after completion of projects. More than three quarters (76; 76.7%) of the participants believe that the quality of the practice of identifying lessons learnt after completion of a project is either "very good" or "good". In addition, it is interesting to notice that a majority of nearly half (46; 46.5%) of the participants assert that an obligation "always" exists for employees to formally share information and knowledge gained at conferences, workshops, etc. More so, a vast majority (85; 87.7%) of the respondents perceive the quality of selection process for new employees to be either "very good" or "good".

More than half (54; 54%) of the participants report that their organisations have between 50%-74% of employees who are additionally educated. However, a significant number (22; 22%) of respondents have less than 25% of employees who are additionally educated. This can be attributed to lack of commitment by their organisations towards paying for the employees' training. When asked to rate the quality of the programme for additional education of employees in their organisations, more than half (57; 58.2%) of the participants rated it to be "good" while 18.4% (18) rated it to be "poor". The consoling factor is the visibly low turnover of additionally educated employees, as almost two thirds (64; 64.6%) of the participants report that that less than 25% of the additionally educated employees left their organisations within the last 12 months.

More than half (48; 50.5%) of the respondents either "disagree" or "strongly disagree" that key knowledge lists are available in their organisations. This could account for the difficulty in regularly identifying the discrepancy between required

and available knowledge, as seen in more than one third (36; 36%) of the cases. In addition, more than half (50; 50.5%) of the employees and volunteers surveyed reveal that the quality of libraries in their organisations is either “poor” or “very poor”, depicting that NGOs in Malawi still have an enormous task of improving the quality of their libraries. Additionally, the percentage of employees engaged in knowledge management activities is prominently low, with the majority (40; 40.4%) having less than 25 % of employees in their organisations involved.

It can be concluded that the organisations are yet to mature in putting in place infrastructure for knowledge management, with key areas such as key knowledge lists and libraries requiring further attention. The number of employees involved in knowledge management activities also needs to be improved. With these key areas still missing, one can conclude that the infrastructure in Malawian NGOs moderately supports the knowledge transfer process.

Table 4.9: Knowledge management infrastructure

	Strongly agree		Agree		Disagree		Strongly disagree		Total	
	Freq.*	**Perc.**	**Freq.**	**Perc.**	**Freq.**	**Perc.**	**Freq.**	**Perc.**	**Freq.**	**Perc.**
Our organisation has a key knowledge list.	13	13.7	34	35.8	35	36.8	13	13.7	**95**	**100**
Our organisation identifies the discrepancy between required and available knowledge.	9	9	55	55	25	25	11	11	**100**	**100**
	75%–100%		**50%–74%**		**25%–49%**		**0%–24%**		**Total**	
	Freq.	**Perc.**	**Freq.**	**Perc.**	**Freq.**	**Perc.**	**Freq.**	**Perc.**	**Freq.**	**Perc.**
What is the percentage of employees who are additionally educated?	15	15	54	54	9	9	22	22	**100**	**100**
What percentage of additionally educated employees left the organisation within the past 12 months?	12	12.1	15	15.2	8	8.1	64	64.6	**99**	**100**
What is the percentage of employees engaged in knowledge management activities?	2	2	25	25.3	32	32.3	40	40.4	**99**	**100**
	Very good		**Good**		**Poor**		**Very poor**		**Total**	
	Freq.	**Perc.**	**Freq.**	**Perc.**	**Freq.**	**Perc.**	**Freq.**	**Perc.**	**Freq.**	**Perc.**
How would you rate the quality of the programme for additional education of employees?	14	14.3	57	58.2	18	18.4	9	9.2	**98**	**100**
How do you rate the quality of the selection process for new employees?	34	35.1	51	52.6	12	12.4	0	0	**97**	**100**
How do you rate the quality of your organisation's library?	13	13.1	36	36.4	32	32.3	18	18.2	**99**	**100**
How do you rate the quality of the practice of identifying lessons learnt after completion of a project?	32	32.3	44	44.4	21	21.2	2	2	**99**	**100**
	Always		**Sometimes**		**Rarely**		**Never**		**Total**	
	Freq.	**Perc.**	**Freq.**	**Perc.**	**Freq.**	**Perc.**	**Freq.**	**Perc.**	**Freq.**	**Perc.**
There exists an obligation for employees to formally share information and knowledge gained at conferences, workshops, etc.	46	46.5	25	25.3	24	24.2	4	4	**99**	**100**
Our organisation has a practice of identifying lessons learnt after completion of a project.	39	39.4	46	46.5	12	12.1	2	2	**99**	**100**

** KEY: Freq. = Frequency*
Perc. = Percentage

4.9 Knowledge management holders

The findings, reflected in Table 4.10, reveal that more than a third (36; 35.6%) of the surveyed employees and volunteers in Malawian NGOs "always" have a person responsible for knowledge management, while another more than a third (36; 35.6%) "rarely" or "never" have a person responsible for knowledge management in their organisations. When asked about the position and department of the employee responsible for knowledge management, more than two thirds (71; 72.5%) of the participants either "agree" or "strongly agree" that the organisational position of the employee responsible for managing knowledge is appropriate, while almost two thirds 65; 66.3%) of the participants either "agree" or "strongly agree" that the employee responsible for managing knowledge is positioned in the appropriate department or holds an appropriate organisational title. Furthermore, about two thirds (65; 66.3%) of the participants either "agree" or "strongly agree" that this employee's performance appraisal is appropriate with regards to involvement in knowledge management activities.

When asked to rate the quality of rewarding employees for their contribution to knowledge management, more than half (57; 56.4%) of the respondents perceive that the quality is either "good" or "very good". A significant near half (44; 43.6%) of respondents report a "poor" or "very poor" quality of rewarding employees for their contribution to knowledge management. It is clear that NGOs in Malawi still need to do more on adopting methods of rewarding employees for sharing knowledge.

Significant strides have been made in including knowledge in the organisation's mission statement, as supported by an overwhelming majority (82; 81.2 %) of participants who either "agree" or "strongly agree" that their organisations have mission statements that include knowledge. Another issue worth noting is the minimal inclusion of knowledge management activities as part of employees' performance appraisals. Almost two thirds (61; 61.6%) of the respondents report that less than 50% of the employees have knowledge management activities included as part of their performance appraisal. Ideally, knowledge management activities should be

appraised for all employees as it is everyone's responsibility to generate and share knowledge.

Although more than two thirds (63; 63.7%) of the respondents indicate that mentorship programmes either "always" or "sometimes" exist in their organisations, there is need to up the number of employees involved in these programmes as almost half (43; 44.8%) of the participants proclaim that less than 25% of employees in their organisations participate in the mentorship programmes.

Table 4.10: Knowledge management holders

Indicator	Strongly agree		Agree		Disagree		Strongly disagree		Total	
	Freq.*	Perc.	Freq.	Perc.	Freq.	Perc.	Freq.	Perc.	Freq.	Perc.
Our organisation has a mission statement that includes knowledge.	42	41.6	40	39.6	15	14.9	4	4	**101**	**100**
The organisational position of an employee responsible for managing knowledge is appropriate.	28	28.6	43	43.9	10	10.2	17	17.3	**98**	**100**
The employee responsible for managing knowledge is positioned in the appropriate department.	20	20.4	45	45.9	18	18.4	15	15.3	**98**	**100**
The employee responsible for managing knowledge holds an appropriate organisational title.	20	20.4	45	45.9	18	18.4	15	15.3	**98**	**100**
This employee's performance appraisal is appropriate with regards to involvement in knowledge management activities.	28	28.6	37	37.8	19	19.4	14	14.3	**98**	**100**
	Very good		**Good**		**Poor**		**Very poor**		**Total**	
	Freq.	**Perc.**	**Freq.**	**Perc.**	**Freq.**	**Perc.**	**Freq.**	**Perc.**	**Freq.**	**Perc.**
How do you rate the quality of rewarding employees for their contribution to knowledge management?	12	11.9	45	44.6	29	28.7	15	14.9	**101**	**100**
	Always		**Sometimes**		**Rarely**		**Never**		**Total**	
	Freq.	**Perc.**	**Freq.**	**Perc.**	**Freq.**	**Perc.**	**Freq.**	**Perc.**	**Freq.**	**Perc.**
Our organisation has an employee responsible for managing knowledge.	36	35.6	29	28.7	16	15.8	20	19.8	**101**	**100**
Our organisation has a mentorship programme.	27	27.3	36	36.4	23	23.2	13	13.1	**99**	**100**
	75%–100%		**50%–74%**		**25%–49%**		**0%–24%**		**Total**	
	Freq.	**Perc.**	**Freq.**	**Perc.**	**Freq.**	**Perc.**	**Freq.**	**Perc.**	**Freq.**	**Perc.**
What percentage of employees have knowledge management activities included as part of their performance appraisal?	11	11.1	27	27.3	17	17.2	44	44.4	**99**	**100**
What is the percentage of employees who participate in the mentorship programme?	7	7.3	27	28.1	19	19.8	43	44.8	**96**	**100**

** KEY: Freq. = Frequency*
Perc. = Percentage

4.10 Measuring knowledge management

Malawian NGOs were assessed on how they evaluate the effects of knowledge management practices on business performance. Findings show that NGOs in Malawi put considerable efforts towards measuring the impact of knowledge management initiatives, with more than a third (43; 42.6%) of the surveyed employees and volunteers asserting that their organisations "always" have a practice of keeping track of stories and anecdotes confirming the importance of knowledge management. This helps to make the benefits of knowledge management transparent.

Although a significant majority (72; 71.3%) of the participants either "agree" or "strongly agree" that their organisations have performance indicators that are connected to knowledge management, the proportion of these indicators is significantly low. A majority of more than a third (40; 40.8%) of the respondents indicated that the organisational performance indicators connected to knowledge management in their organisations constitute less than 25% of general performance indicators. However, more than two thirds (68; 69.3%) of the participants perceive the quality of indicators of organisational performance connected to knowledge management to be either "good" or "very good".

The need to increase the number and quality of indicators of organisational performance connected to knowledge management is apparent. This will help NGOs in Malawi to evaluate the contribution of knowledge management to the overall organisational performance. A detailed summary of results for measuring knowledge management is reported in Table 4.11.

Table 4.11: Measuring knowledge management

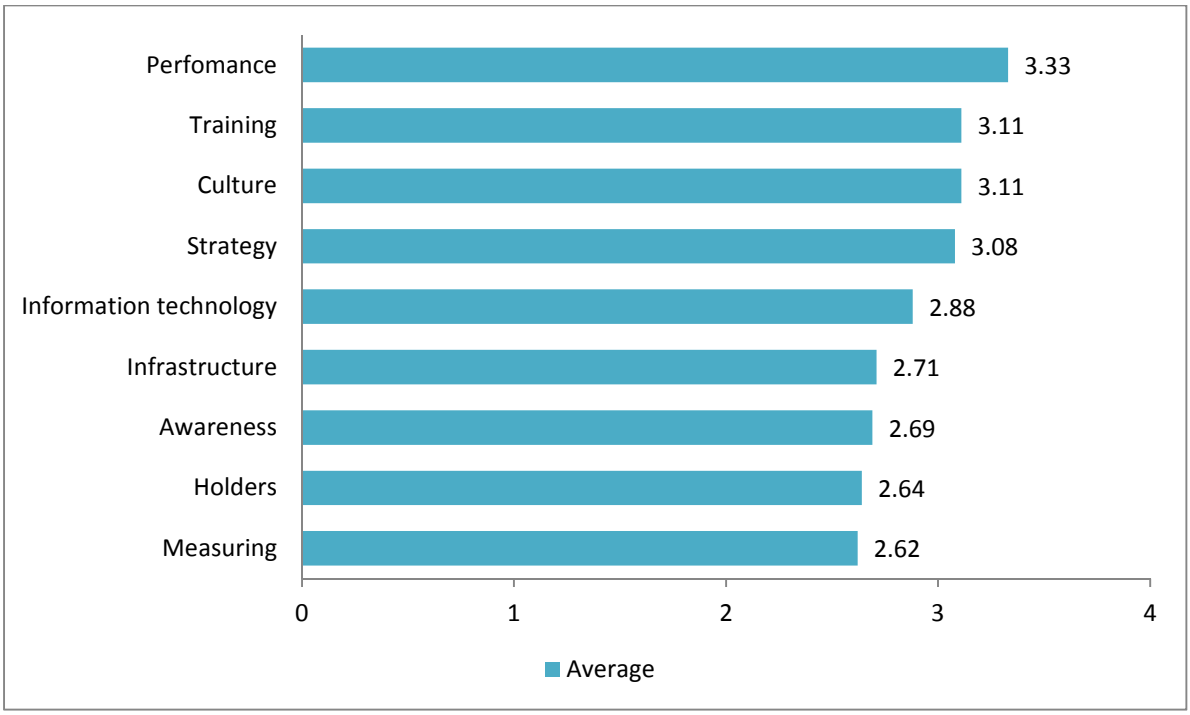
Indicator	**Strongly agree**		**Agree**		**Disagree**		**Strongly disagree**		**Total**	
	Freq.*	**Perc.**	**Freq.**	**Perc.**	**Freq.**	**Perc.**	**Freq.**	**Perc.**	**Freq.**	**Perc.**
Our organisation has performance indicators that are connected to knowledge management.	29	28.7	43	42.6	21	20.8	8	7.9	**101**	**100**
	75%–100%		**50%–74%**		**25%–49%**		**0%–24%**		**Total**	
	Freq.	**Perc.**	**Freq.**	**Perc.**	**Freq.**	**Perc.**	**Freq.**	**Perc.**	**Freq.**	**Perc.**
What is the percentage of organisational performance indicators connected to knowledge management?	0	0	24	24.5	34	34.7	40	40.8	**98**	**100**
	Very good		**Good**		**Poor**		**Very poor**		**Total**	
	Freq.	**Perc.**	**Freq.**	**Perc.**	**Freq.**	**Perc.**	**Freq.**	**Perc.**	**Freq.**	**Perc.**
How do you rate the quality of indicators of organisational performance connected to knowledge management that are used?	12	12.2	56	57.1	16	16.3	14	14.3	**98**	**100**
	Always		**Sometimes**		**Rarely**		**Never**		**Total**	
	Freq.	**Perc.**	**Freq.**	**Perc.**	**Freq.**	**Perc.**	**Freq.**	**Perc.**	**Freq.**	**Perc.**
Our organisation has a practice of keeping track of stories and anecdotes confirming the importance of knowledge management.	43	42.6	30	29.7	16	15.8	12	11.9	**101**	**100**

** KEY: Freq. = Frequency*
Perc. = Percentage

4.11 Knowledge management practices in Malawian NGOs

The knowledge management practices undertaken in Malawian NGOs were weighted on a scale of 1 (worst score) to 4 (best score), to determine the extent to which they were being practised. Results indicate that knowledge management practices undertaken in Malawian NGOs are highly oriented towards a vibrant knowledge management culture (3.11) and training (3.11), compared to measuring knowledge management (2.62) and managing of knowledge management holders (2.64). The average grade of each factor is represented in Figure 4.1.

Figure 4.1: Knowledge management practices in Malawian NGOs



4.12 Knowledge management practices vs. main focus area

A one-way ANOVA was conducted to examine whether there were statistically significant differences among NGOs with different main focus areas in relation to their knowledge management practices. The results revealed statistically significant differences among the sectors, as reflected in Table 4.12 below.

Post-hoc Games-Howell tests revealed statistically significant differences between the knowledge management culture of respondents in the education and research sector (M = 3.67, SD = 0.00) and civil rights sector (M = 3.43, SD = 0.00), compared to the arts, culture and humanities sector (M = 2.71, SD = 0.00), and the religion sector (M = 2.78, SD = 0.373). Respondents in the education and research and civil rights sectors reported significantly higher knowledge management culture-oriented practices compared with respondents in the arts, culture and humanities sector and the religion sector. The leading sectors are also seen to be ahead in visibly rewarding their employees for sharing knowledge and making available specific places intended for informal socialisation of employees during working hours.

In addition, the results show that the civil rights sector (M = 3.89, SD = 0.00) and the education and research sector (M = 3.63, SD = 0.00) are notably leading in putting in place knowledge management strategies aligned to the overall organisational strategy, as compared to their counterparts in the arts, culture and humanities sector (M = 2.13, SD = 0.00) and religion sector (M = 2.69, SD = 0.794). The findings also indicate that the civil rights sector (M = 3.61 SD = 0.174) uses IT-based systems to effectively manage knowledge compared to their counterparts in the religion sector (M = 2.26, SD = 0.163).

The education and research sector (M = 3.86, SD = 0.00) reports considerable strides in employees' training and capacity building, while the arts, culture and humanities sector (M = 2.14, SD = 0.00) is again lagging behind in this area. The organisation in the education and research sector distinctly encourages employees to upgrade their education through funding their education and providing knowledge management related training. The infrastructure and knowledge management holders are significantly well managed in the civil rights (M = 3.33, SD = 0.00) and education

and research (M = 3.30, SD = 0.00) sectors, compared to other sectors like, arts, culture and humanities (M = 1.6, SD = 0.00). Another significant difference revealed by the findings is in the measuring of knowledge management effects. The civil rights (M = 3.25, SD = 0.00) sector reports a higher number of performance indicators linked to knowledge management, compared to the arts, culture and humanities (M = 1.5, SD = 0.00) and agriculture (M = 1.80, SD = 1.095) sectors.

Civil rights (M = 3.86, SD = 0.00) and health (M = 3.52, SD = 0.353) sectors report higher knowledge management performance based on individual performance, as compared to the human rights (M = 3.13, SD = 0.252) and arts, culture and humanities (M = 3.14, SD = 0.00) sectors. There were no other significant differences among the other groups.

Table 4.12: Knowledge management practices vs. main focus area

		Awareness		Culture		Strategy		Information Technology		Training		Performance		Infrastructure		Holders		Measuring	
	N	Mean	Std. deviation	Mean	Std. deviation	Mean	Std. deviation	Mean	Std. deviation	Mean	Std. deviation	Mean	Std. deviation	Mean	Std. deviation	Mean	Std. deviation	Mean	Std. deviation
Agriculture	5	2.45	0.685	3.12	0.235	2.98	0.137	2.84	0.419	2.74	0.626	3.31	0.626	2.27	0.747	1.88	0.931	1.80	1.095
Arts, Culture and Humanities	3	2.70	0.000	2.71	0.000	2.13	0.000	2.47	0.000	2.14	0.000	3.14	0.000	2.10	0.000	1.60	0.000	1.50	0.000
Civil Rights	3	3.20	0.000	3.43	0.000	3.88	0.000	3.61	0.175	3.43	0.000	3.86	0.000	2.91	0.000	3.33	0.000	3.25	0.000
Education and Research	1	2.95	0.000	3.67	0.000	3.63	0.000	3.00	0.000	3.86	0.000	3.43	0.000	3.00	0.000	3.30	0.000	3.00	0.000
Environment and Animals	3	2.17	0.048	3.41	0.137	2.88	0.433	2.89	0.448	3.29	0.495	3.29	0.000	2.93	0.382	2.97	0.115	2.92	0.289
Health	27	2.60	0.538	3.30	0.326	3.33	0.540	2.96	0.516	3.34	0.523	3.52	0.353	2.79	0.572	2.87	0.713	2.87	0.644
Human Rights	25	2.91	0.481	2.83	0.401	2.93	0.537	2.78	0.387	2.83	0.356	3.13	0.252	2.66	0.509	2.53	0.646	2.51	0.629
Religion	4	2.58	0.433	2.77	0.373	2.69	0.794	2.26	0.163	3.29	0.495	3.43	0.330	2.23	0.157	2.22	1.020	2.13	0.144
Other	20	2.70	0.493	3.22	0.385	3.05	0.631	3.00	0.490	3.25	0.558	3.24	0.457	2.90	0.531	2.72	0.894	2.71	0.882
Overall	**91**	**2.69**	**0.512**	**3.11**	**0.409**	**3.08**	**0.601**	**2.88**	**0.479**	**3.11**	**0.550**	**3.33**	**0.391**	**2.71**	**0.548**	**2.64**	**0.788**	**2.62**	**0.761**

4.13 Knowledge management culture vs. period of stay within the organisation

The researcher used a one-way ANOVA analysis to examine whether there were statistically significant differences among employees and volunteers with different years of experience with their organisations in relation to their views on knowledge management culture practices. The results revealed statistically significant differences among the different groups F (3, 92) = 7.155, p = .05.

Post-hoc Scheffe tests revealed statistically significant differences between employees and volunteers who have been with the organisation for over eight years (M = 2.60, SD = 0.440) and those who have been with the organisation for less than three years (M = 3.23, SD = 0.351) and those who have been with the organisation for three to five years (M = 3.11, SD = 0.377). Employees and volunteers who have been with the organisation between zero and five years reported a significantly higher knowledge management oriented culture compared with those who have stayed with the organisations for more than eight years. This clearly indicates that the less experience employees have, the higher the mean. An overview of the results for a one-way Anova analysis of knowledge management culture vs. period of stay within the organisation is reflected in Table 4.13.

Table 4.13: Knowledge management culture vs. years of experience in the organisation

	N	**Mean**	**Std. deviation**
Less than 3 Years	56	3.23	0.351
3–5 Years	25	3.11	0.377
6–8 Years	7	2.99	0.440
More than 8 Years	8	2.60	0.440
Total	**96**	**3.12**	**0.406**

4.14 IT for knowledge management vs. respondents' age

A one-way ANOVA test was conducted to examine whether there were statistically significant differences among employees and volunteers in different age groups in relation to their satisfaction with the use of information technologies for knowledge management. The results revealed statistically significant differences among the age groups $F(4, 97) = 3.17$, $p = .05$.

Post-hoc Games-Howell tests revealed statistically significant differences between employees and volunteers over 50 years (M = 2.41, SD = 0.240) and those 25 years and below (M = 3.02, SD = 0 .434) and those 26 to 30 years old (M = 3.04, SD = 0.603), as shown in Table 4.14. Employees and volunteers 30 years and below reported significantly higher satisfaction with the use of information technologies for knowledge management, compared with employees and volunteers over 50 years. There were no other significant differences between the other groups. The emerging general trend is that the older the respondents, the lower the mean.

Table 4.14: Satisfaction with use of IT for knowledge management vs. age

	N	Mean	Std. deviation
25 Years and below	15	3.02	0.434
26–30 Years	26	3.04	0.603
31–39 Years	35	2.77	0.395
40–49 Years	20	2.74	0.426
50 Years and above	6	2.41	0.240
Total	**102**	**2.85**	**0.485**

4.15 Correlation among knowledge management success factors

Spearman's rank correlation coefficient test was performed mainly to examine the links among knowledge management practices. Results suggest a positive correlation among success factors at the 0.01 level (2-tailed), as shown in Table 4.15.

A very strong correlation (rs = 0.823) was reported between knowledge management culture and knowledge management strategy as well as between knowledge management holders and measuring knowledge management. Furthermore, the results suggest significantly strong correlations ($rs \geq 0.600$) among 23 out of 36 correlations, while moderate correlations ($0.400 \leq rs \leq 0.599$) were observed among 9 out of 36 correlations. Only 4 out of 36 correlations were reported to be weak ($0.200 \leq rs \leq 0.399$).

It can be seen from the results that the success factor of knowledge management holders has the highest number of strong correlations with the other factors. Apart from a very strong correlation with measuring knowledge management, it registered strong correlations with all the other success factors, except knowledge management awareness, where a moderate correlation was observed. The weakest correlations were observed between knowledge management awareness and other factors. This success factor has weak correlations with knowledge management strategy, training and knowledge management, individual performance and knowledge management culture, while it exhibits moderate correlations with IT for knowledge management, knowledge management infrastructure, measuring knowledge management and knowledge management holders.

In general, results suggest that the knowledge management success factors are interlinked, which implies that changes in one component will affect others.

Table 4.15: Spearman correlations among knowledge management success factors

	Awareness	Strategy	Information technology	Training	Performance	Infrastructure	Measuring	Knowledge holders	Culture
Awareness	1								
Strategy	.377	1							
Information Technology	.427	.735	1						
Training	.273	.731	.657	1					
Performance	.214*	.541	.477	.600	1				
Infrastructure	.447	.668	.719	.675	.415	1			
Measuring	.427	.684	.779	.726	.566	.714	1		
Knowledge management holders	.538	.777	.750	.703	.610	.704	.823	1	
Culture	.290	.823	.728	.798	.538	.684	.765	.778	1

* Correlation is significant at the 0.05 level (2-tailed), while the rest are significant at the 0.01 level (2-tailed).

4.16 Chapter summary

A majority of the survey respondents were middle-aged males, with at least an undergraduate degree and had been with their organisations for less than three years. They represented NGOs from arts, culture and humanities, education and research, environment and animals, health, human rights, civil rights and other sectors. Most of the NGOs represented had the objectives of empowering livelihoods of the poor and marginalised, as well as upholding the rights of women and children.

NGOs in Malawi exhibited low to medium awareness of knowledge management issues. Although they tend to pursue a number of practices to support a knowledge-oriented culture, they are still coming up short in availing and supporting social networks and rewarding employees for sharing knowledge, which are essential practices for acquiring and sharing tacit knowledge. Another striking observation is how these organisations lack a vision on how to apply knowledge management in their daily undertakings. Therefore, the practices are implemented without proper prior planning and thus no systematic approach is used.

Despite considerable efforts being shown to embrace IT for knowledge management, the IT tools have not been aligned to address organisational needs such as elimination of efforts duplication and eradication of replicated mistakes. In addition, NGOs in Malawi are yet to harness the capabilities of IT tools to improve their knowledge mapping with tools such as yellow pages listings. Results also reveal that NGOs in Malawi are implementing a number of training activities. However, their financial support for training employees is still minimal and knowledge management related training is still lacking.

Most respondents exhibited willingness to share knowledge and flexibility to use other people's knowledge, but there is still an alarming unwillingness to learn from others. The culture of re-using available knowledge still needs to be enforced since, in most cases, individuals figure out solutions on their own instead of using other people's ideas. Apart from clearly lacking suitable employees responsible for

knowledge management, NGOs in Malawi are yet to mature in implementing solid knowledge management infrastructure, in particular knowledge lists and libraries.

Upon comparing the practices in these NGOs, knowledge management culture and training came up as the most progressed aspects while knowledge management measuring is the least developed. A further analysis of the practices by the sector in which the NGOs operate revealed that the arts, culture and humanities sector is lagging way behind in all considered aspects as compared to the leading education and research, civil rights and health sectors. Individuals from the leading sectors also exhibited higher performance. It was also interesting to observe that those with less years at the organisation displayed a more knowledge-oriented culture than the long stayers. In addition, younger employees tended to be more satisfied with IT systems for knowledge management than older employees. A correlation analysis of the success factors revealed strong positive relationships among the factors.

This chapter presented survey findings, enabling the researcher to examine knowledge management practices being implemented in Malawian NGOs. Chapter 5 provides a discussion of the research findings while addressing the research questions.

CHAPTER 5: DISCUSSION

The survey enabled the researcher to examine knowledge management practices being implemented in Malawian NGOs and to determine how the practices influence the knowledge management process. In addition, the correlations among various knowledge management success factors were analysed. The following primary questions were addressed:

1. Which knowledge management practices are being implemented by NGOs in Malawi and to what extent?
2. What influence do these practices have on the knowledge management process?
3. What are the relationships among the knowledge management success factors?

Given that Malawi is among the poorest countries in the world and has poor support infrastructure (The World Bank, 2014), one would expect minimal to no knowledge management initiatives in this country. However, results from this study suggest that apart from the high individual performance in relation to knowledge management, the knowledge management practices in Malawian NGOs are inclined towards a rich knowledge management culture, with strong training initiatives, while the management of knowledge holders and practices to measure the effects knowledge management are still in their infancy.

An analysis of the influence of the knowledge management practices on the knowledge management process revealed an unbalanced pursuit of knowledge management practices, favouring the knowledge-generation process but fall short in knowledge-application activities. The various knowledge management success factors were found to be interlinked, thus it can be concluded that the various knowledge management success factors are a body, where each factor has its own function but when one suffers, all the other parts share its suffering and vice versa.

These findings lead to the conclusion that knowledge management capabilities are still underexploited in Malawian NGOs. It is indisputable that once extensively utilised, they can create value for NGOs, which is comparable to the value demanded by their constantly-changing operating environments. The findings of this study

conform with previous research (Matzkin, 2008:156; Safa et al., 2006:84; Lettieri et al., 2004:29), emphasising that NGOs should carefully structure their knowledge management activities, being conscious of the factors that enable knowledge to contribute to their performance.

Within this chapter, study results are discussed in detail, firstly by giving an overview of the demographic attributes of the respondents. This is followed by an examination of the progress of implementation of the success factors measured in Malawian NGOs. A detailed discussion of the influence of knowledge management practices on the knowledge management process then follows. Finally, relationships among the various success factors are unveiled.

5.1 Demographic attributes of respondents

The respondents consisted of more males than females. This was expected since Malawi is observed to have a male-dominated (80% on average) employment distribution (Equity and Rural Employment Division of Food and Agriculture Organization of the United Nations (FAO), 2011:7), hence the difficulty in attracting a balanced gender participation in the research. The age distribution of respondents was fairly even, with the majority of respondents aged between 31 and 39 years old, which was a slight deviation from Safa et al.'s (2006:76) respondents, whose majority were between the ages of 26 and 30 years. This could be attributed to their focus on only one organisation as compared to this study, which surveyed 45 organisations. It is not surprising to note that a larger proportion of respondents had a minimum of an undergraduate degree, since the knowledge-intensive nature of NGOs urges them to draw their workforce from well-educated individuals (Lettieri et al., 2004:17).

The number of respondents of who were employed with their organisations for more than five years was significantly small; in fact, the majority of respondents had been employed with their organisations for less than three years. One can therefore conclude that NGOs in Malawi are being confronted by a fluid workforce due to the engagement of volunteers, rotations and other factors, leading to loss of important organisational memory. However, this problem may not be unique to NGOs in Malawi but rather a general problem in the non-profit sector, especially in developing

countries, given similar observations by researchers in other parts of the world (Safa et al., 2006:76). Although it may be argued that rotation gives a chance for an organisation to have new ideas infused, most non-profits rely on tacit knowledge embodied in individuals to solve complex issues and as such it may be especially beneficial to focus efforts on knowledge-sharing strategies that ensure that accumulated wisdom and skills are not lost when individuals leave.

5.2 Awareness of knowledge management

The limited levels of awareness of knowledge management issues observed in Malawian NGOs are comparable with what was observed in Peruvian NGOs (Matzkin, 2008:156). Knowledge will not be well managed in Malawian NGOs until individuals from the organisations are fully aware of their roles and responsibilities in the knowledge management process. Although managers are expected to lead the knowledge management project, its success is not their sole responsibility, but rather the collective responsibility of all team members. It is clear that by defining knowledge management as the "use of acquired knowledge to make effective decisions", some respondents are ignorant of the processes involved in knowledge management and, consequently, they cannot effectively take up their roles in these processes.

Furthermore, it is an indication that although individuals are aware of some of the knowledge management concepts, they are not fully aware of the key components of knowledge management. This observation concurs with Safa et al.'s (2006:84) conclusion that employees in NGOs are not fully aware of intellectual capital issues. Recognising knowledge as a key organisational asset requires the organisation to have a coherent view of its knowledge concepts, forming a basis for establishing the business value of knowledge management, as alluded to by Matzkin (2008:152).

Additionally, failure by some respondents to distinguish between knowledge management and information management is perilous to the knowledge management process, the bottom line being that although data and information provide a base for knowledge creation, organisations should distinguish between these terms and harness the increasing information base to actively create valuable knowledge; otherwise, they will drown in information but be knowledge starved.

Although respondents claim to be highly knowledgeable about knowledge management issues, the observed lack of ownership is detrimental to the effective cultivation, sharing and use of knowledge resources (Corfield et al., 2013:181).

5.3 Knowledge management culture

Knowledge management culture was observed to have the most spread practices within Malawian NGOs. This could be attributed to the fact that although some of these practices are valuable to a knowledge management oriented culture, their implementation is not directly linked to the knowledge management initiatives but are rather for supporting other processes within the organisation. For instance, organisations, even those not embarking on any knowledge management project, can invest time and resources to improve communication among employees, with the goal of nurturing relationships among individuals and groups, for effective coordination of activities.

Despite NGOs in Malawi generally exhibiting knowledge management practices that favour knowledge sharing, there is a striking absence of some critical aspects such as capturing tacit knowledge, and a culture of visibly rewarding employees for sharing knowledge. This is consistent with the findings of Safa et al. (2006:77) who acknowledge the lack of a culture of rewarding individuals for sharing knowledge amongst NGOs.

Although use of incentives to motivate employees to generate and share knowledge may seem like a trivial issue, lack of it has led to failure of some knowledge management ambitions (Maholtra, 2003:2). Employees need to be motivated to invest their time and energy in solving other people's problems. Given that NGOs such as those in Malawi may not be capable of providing financial rewards, other forms of rewards such as employee recognition which fulfils the psychological needs and desires of employees should be considered to boost morale as the employee's knowledge sharing efforts are recognised.

However, a better understanding of the importance of knowledge sharing remains pivotal for ensuring that employees don't share knowledge only to maximise on incentives, but rather to add value to the organisation. The efforts to encourage

sharing of knowledge among employees can be more effective if coupled with some incentives and visibly rewarding those who share their knowledge. Similarly, management needs to develop a strong knowledge-sharing culture, with rich transmission channels and motivation, since knowledge sharing is largely determined by the habits of the knowledge holders and their willingness to seek out and/or be receptive to the knowledge sources.

Perhaps by not visibly rewarding employees who share knowledge, NGOs in Malawi are unknowingly promoting knowledge hoarding, with the knowledge hoarders feeling more valuable and irreplaceable than those who share knowledge. This is corroborated by the striking observation that employees and volunteers who have been with the organisation between less than five years exhibit a significantly higher knowledge management oriented culture compared with those employed by their organisations for more than five years. This revealation may be an indication that long stayers perceive newcomers as a threat to their jobs and are consequently unwilling to share their knowledge with them. The charge is therefore, placed upon top level leadership to create a corporate culture that invigorates the willingness of all players to share knowledge. Likewise, the enviroment has to enable employees to admit their lack of knowledge and be stimulated to acquire new knowledge without perceiving accessing other people's knowledge as a sign of weakness (Chua & Lam, 2005:14).

While experienced workers are encouraged to transfer their knowledge to new or less-experienced workers, there is a gap in capturing tacit knowledge, which is usually tapped through informal socialisation. The stunningly low availability of places for informal socialisation for employees in Malawian NGOs could be influenced by:

1. Management not seeing the value of having such places.
2. These places existing but employees being unaware of them.
3. The poor supporting infrastructure coupled with financial constraints making it difficult for NGOs to dedicate resources to such platforms.
4. A combination of the above factors.

If NGOs in Malawi are to foster the valuable expertise of tacit knowledge, they need to consciously and intentionally promote the generation of tacit knowledge through the use of social platforms. These places remain crucial for trading highly valuable

tacit knowledge and for sparking fresh ideas and responsiveness to the changing environment (Smith, 2001:314). In addition, Malawian NGOs should foster social platforms for interaction with communities of practice in order to tap the tacit elements found in the communities that span beyond the borders of their organisations. This can bring in innovative ideas and facilitate their smooth integration into other communities.

Management in Malawian NGOs need to realise that a significant part of organisational knowledge is embodied in social processes, hence the need to support the networks. Furthermore, understanding that even though socialising may seem to detract from working hours, they will have more to gain than lose from this 'chaos'. Those that already have the platforms should ensure that their employees are aware that such places exist and should encourage their use. Where the supporting infrastructure is a limiting factor and an Internet connection is the only requirement, Malawian NGOs should consider using already existing forums such as Yammer and Facebook for the interaction of their employees.

Taking everything into account, NGOs in Malawi exhibit a culture that is oriented towards knowledge generation but lacking in knowledge transfer. This manifests itself in the observation that enormous efforts and resources are invested in actively encouraging employees to capture experiences and lessons learnt and individuals proactively create and generate new knowledge. These activities support the knowledge generation process (Jennex & Olfman, 2004:3; Gholami et al., 2013:206). On the other hand, the pronounced lack of motivation or rewards for individuals who share knowledge, coupled with the unwillingness of more experienced staff to share their knowledge with new or less experienced staff, is detrimental to the knowledge transfer process (Zaim et al., 2007:57; Jashapara, 2004:7). More concerning is the failure to support informal socialisation of employees during working hours, losing out on tacit knowledge. This negatively affects both the knowledge generation and knowledge transfer processes.

5.4 Knowledge management strategy

Although top management recognise knowledge as an important part of the organisational strategy and accordingly encourage knowledge sharing across departments, this is not sufficient to draw benefits from the knowledge management initiatives. NGOs in Malawi lack a clear vision on how they are to apply the gained knowledge in their daily undertakings. Knowledge management practices are meant to positively influence knowledge management processes and ultimately improve the daily processes of an organisation (Andreeva & Kianto, 2012:618). It is therefore extremely important for NGOs in Malawi to properly plan for the adoption of knowledge management activities and have a systematic approach to the application of knowledge management practices to organisational functions and processes for organisational effectiveness.

In conclusion, the strategies in Malawian NGOs are rich in knowledge transfer practices but lacking in knowledge application.

5.5 Information technology for knowledge management

Given that Malawi has poor support infrastructure, and its presence on the Internet is one of the lowest in the world (4.5%) (Sharra, 2012), one would expect a very low usage of technology-based systems for knowledge management. However, the research findings propose that NGOs in Malawi have embraced technological advances, even ahead of some of their for-profit counterparts, making their ground fertile for successful knowledge management initiatives.

Despite the availability of technology-based systems in Malawian NGOs, duplication of efforts is still a challenge in most organisations. This can be attributed to lack of clear strategy to systematically use knowledge management practices to address the organisation's needs. In other words, there is no link between the knowledge management practices and the vital needs of the organisation. These findings correspond with Renshaw and Krishnaswamy's (2009:462) observation that only a few of the knowledge management practices in NGOs are consciously performed to meet the organisation's operational needs. Similarly, Safa et al. (2006:84) concluded that some of the practices in NGOs are not planned for knowledge management.

NGOs in Malawi should identify their lacking areas such as duplication of efforts and make use of the available IT tools to effectively address these areas, as a result becoming more efficient.

Another obstructive issue notable in Malawian NGOs is their absence from yellow page listings. As a result, they are losing out on the capabilities of corporate yellow pages to determine their location and to categorise the valuable expertise of tacit knowledge. Malawian NGOs should consider using corporate yellow pages together with other expertise locators such as expert networks and other knowledge maps to shed light onto how widespread certain tacit knowledge is and effectively plan to capture it (Gamble & Blackwell, 2001:172; Lettieri et al., 2004:28). This strengthens the assessment, organisation and re-use of important knowledge available to the firms.

In Malawian NGOs, younger employees and volunteers reported a significantly higher satisfaction than their older counterparts with the use of information technologies for knowledge management. These findings suggest that even in cases where the systems are in place for knowledge management, no proper training and guidance is given to employees to enable effective use of these systems. Due to their keen interest in technology, younger employees can easily explore and learn how to use systems, thus finding more satisfaction than older employees. This leads to the conclusion that it is not enough to put systems in place: employees need to be trained to effectively use these IT tools to aquire, organise and assess, transfer and apply knowledge.

It can be observed that the IT systems in Malawian NGOs support the organisation and assessment of knowledge through the use of technology to keep knowledge in accessible formats, maintaining and updating it (Turbigi, 2012:6; Chang & Chuang, 2011:6171). However, there is a lack of support for the knowledge application process as evidenced by the duplication of efforts and the organisations' absence from yellow page listings, thus impacting negatively on the re-use of important knowledge available. In addition, the observed lack of training of employees for better use of the IT tools is adverse to the knowledge transfer and application processes.

5.6 Training and knowledge management

Training practices were found to be more established than many other practices in Malawian NGOs. This was expected since training is used to support other organisational processes apart from knowledge management. NGOs in Malawi need to actively encourage their employees to continue their education by providing funding. Perhaps this is a common challenge in NGOs as Peruvian NGOs were also found to be characterised by extremely poor budgets for personnel training (Matzkin, 2008:126). In addition, Lettieri et al. (2004:28) observes that where training is provided in NGOs, it is not well coordinated. If NGOs are to increase their knowledge base, they need to invest in the introduction of training activities and ensure that the acquired skills are productively applied for the organisation's betterment.

Additionally, Malawian NGOs need to train their employees on how to use the knowledge management systems, as well as educate them with regard to the benefits of sharing knowledge. Knowledge management related training can stimulate the interest of employees on knowledge management issues, hence positively influencing knowledge sharing.

It can be concluded that the training in Malawian NGOs overwhelmingly supports the knowledge transfer process through activities such as documenting training manuals and daily procedures and encouraging experienced workers to transfer their knowledge to new or less experienced workers. However, the knowledge generation process is weakly supported as evidenced by non-committal of funds for the educational development of employees. This is an important practice that can sharpen knowledge-acquiring skills as well as opening opportunities for employees to acquire knowledge from external sources. In addition, the low levels of knowledge management training can impact negatively on the knowledge generation process.

5.7 Individual performance and knowledge management

In spite of employees and volunteers of NGOs in Malawi being flexible in applying other people's knowledge, in order to become more efficient and effective, they prefer to figure out solutions on their own rather than using ideas from colleagues. This could be a result of a culture where accessing other people's knowledge is perceived as a sign of weakness. NGOs need to address this predicament as it is detrimental to productivity. Employees waste a lot of time trying to solve problems that have previously been successfully and effectively resolved.

An analysis of the correlation between the other knowledge management success factors and performance was performed and results suggest that where value-adding practices were adopted, individual performance improved. These findings are supported by Akram and Bokhari (2011:47) who conclude that effective knowledge sharing has a positive contribution to individual performance. Similar themes are also captured by Singh and Sharma (2011:127) who established that knowledge management enhances employee satisfaction, thus improving their performance.

On the contrary, Safa et al. (2006:84) found no direct connection between knowledge management practices and individual performance. While these researchers' findings cannot be dismissed, it is important to consider that their study focused on one organisation, thus the culture of the organisation might have a bearing on the behaviour of respondents and, ultimately, on the indicators used to assess their performance.

It is, however, important to notice that the feedback on individual performance reflects the views of individuals on their contribution to the organisation's knowledge. It would have been useful if supervisors had also rated their subordinates and results were compared.

Summing it up, it is pronounced that employees in Malawian NGOs are committed to the knowledge generation and knowledge transfer processes. This is signified by the individuals' willingness to contribute to the knowledge base and to share ideas.

However, the application of the acquired knowledge remains low as individuals prefer to problem solve on their own instead of using ideas from colleagues.

5.8 Knowledge management infrastructure

Malawian NGOs lack solid infrastructure for effectively managing knowledge. This can be attributed to the financial constraints in NGOs that limits their ability to put up reliable and fully extensive knowledge management infrastructure, especially in the case of Malawi where connectivity is often poor. In Malawi, NGOs have to think of putting in place infrastructures such as repositories, libraries, knowledge lists and improving their quality in cases where they exist to enable equitable distribution of information. Libraries can be a good anchor for resource sharing and networking, thereby expanding the access to knowledge for their employees.

Key knowledge lists are not available in a considerable number of organisations, hence the difficulty in regularly identifying the discrepancy between required and available knowledge. It is essential to take stock of knowledge and skills that employees in an organisation possess, not only to aid identification of knowledge gaps but also to facilitate the setting up of measures that aid employees to acquire and transfer the required knowledge (Vidović, 2010:15). NGOs in Malawi are yet to mature in putting in place a solid infrastructure for supporting knowledge management activities, with key areas such as knowledge lists and libraries requiring further attention.

The displayed strength in identifying and sharing lessons learnt support the knowledge generation and knowledge transfer processes. However, the inadequate support of employees' additional education, coupled with poor quality libraries and knowledge lists has adverse effects on the same processes.

5.9 Knowledge management holders

Apart from including knowledge in the organisation's mission statement, it remains important to ensure that each employee as a knowledge holder is motivated to share their knowledge. It is essential to make knowledge management practices part of the appraisal and to reward sharing of knowledge. The need then arises for an individual

who is responsible for identifying specific, targeted approaches to knowledge collection to leverage the firm's knowledge resources in key service areas. This will enable the organisations to keep their content fresh and updated, utilising client feedback to present improvements across the system and to coordinate the organisation and assessment of knowledge resources, among other things.

The visible absence of an appropriate person to manage the knowledge affairs of the organisations compromises the entire knowledge management process. More so, the poor quality of the reward system for knowledge sharing, added to the moderate levels of mentorship programmes, negatively impacts the knowledge management process.

5.10 Measuring knowledge management

Knowledge management measuring was found to be the least developed aspect of knowledge management in Malawian NGOs, and this could be attributed to the inherent difficulty of measuring intangible assets (Grossman, 2006:243). Malawian NGOs are yet to overcome the challenge of measuring the performance of knowledge management initiatives within their organisation. Although this seems to be a big challenge even in the for-profit sector (Turner & Minonne, 2010:164), it remains a crucial step for making the benefits and performance of knowledge management more transparent.

Apart from keeping track of success stories, NGOs in Malawi need to include more performance indicators connected to knowledge management, covering aspects such as the quality, quantity, transfer and usage of the knowledge base, as recommended by Resatsch and Faisst (2004:6). This may also involve evaluating the quality of systems used for knowledge management, the reliability, relevance, accuracy and up to datedness of the content. It can be challenging to improve the knowledge management process if no mechanisms are in place to measure them, hence the need to constantly evaluate the effects of knowledge management on the operational performance.

5.11 Knowledge management practices in Malawian NGOs

Following an assessment of the knowledge management success factors and assigning average grades to them, as shown in Figure 4.1, individual performance came out as the most prominent knowledge management success factor in Malawian NGOs. This implies that the performance of employees in Malawian NGOs with regards to knowledge management is considerably high. However, not undermining the findings, the results thereof reflect the views of individuals on their performance and contribution to the knowledge management activities of their organisations. It would have been useful if supervisors had also rated their subordinates and results were compared.

Knowledge management culture and training are joint second highest prevalence in Malawian NGO practices. This could be attributed to the fact that although some of these practices are valuable to a knowledge management oriented culture, their implementation is not directly linked to the knowledge management initiatives but are rather for supporting other processes within the organisation. Again, training is used to support many other organisational processes apart from knowledge management.

Coming slightly lower than knowledge management culture and training is the knowledge management strategy, suggesting that despite their challenges, NGOs in Malawi make an effort to put knowledge management strategies in place. IT and infrastructure rank fourth and fifth, depicting that Malawian NGOs lack solid technology and infrastructure for effectively managing knowledge. This can be attributed to the financial constraints in NGOs that limit their ability to put up reliable and fully extensive knowledge management systems, especially in the case of Malawi where connectivity is often poor.

The findings are a slight deviation from those of Vidović (2010:10) who ranked IT for knowledge management and knowledge management infrastructure higher than knowledge management culture. The differences can be attributed to the fact that his study focused on organisations in the for-profit sector that are presumed to be more technologically and infrastructurally advanced compared to those in the non-profit sector (Schneider, 2003:383; Saeed et al., 2008:438).

The limited levels of awareness of knowledge management issues observed in Malawian NGOs are comparable to what was observed in Peruvian NGOs (Matzkin, 2008:156). This confirms the notion that although these organisations seem to engage in a number of knowledge management practices, they may not be fully aware of the key components of knowledge management (Safa et al., 2006:84).

The management of knowledge holders was found to be among the least developed success factors in Malawian NGOs. This is consistent with the findings of Vidović (2010:10) who found the management of knowledge holders to be in its infancy.

Finally, knowledge management measuring was found to be the least developed aspect of knowledge management in Malawi NGOs, and this could be attributed to the inherent difficulty of measuring intangible assets (Grossman, 2006:243). It seems this challenge in not unique to the non-profit sector as Vidović (2010:10) also found the use of knowledge management measures to be very poor in the business sector.

Apart from the high individual performance in relation to knowledge management, it can be deduced that the knowledge management practices in Malawian NGOs are inclined towards a rich knowledge management culture, with strong training initiatives, while the management of knowledge holders and knowledge management measuring are still lacking.

5.12 Influence of knowledge management practices on the knowledge management process

Until recently, research over the years has confirmed a link between knowledge management practices and the perfomance of organisations in the for-profit sector (Zack et al., 2009:404; Mills & Smith, 2011:167–168; Zaied et al., 2012:33; Gholami et al., 2013:212–213). The results of this study support and augment these findings by showing that adoption of appropriate knowledge management practices by NGOs catalyses the success of knowledge management processes and individual performance. These findings are in conformity with those of Lettieri et al. (2004:29) and Safa et al. (2006:84) who assert that proper implementation of knowledge management solutions can bring high degrees of effectiveness and efficiency in the non-profit sector, thus ultimately improving their organisational performance.

It can be deciphered from previous discussions that the knowledge management awareness levels of NGOs in Malawi moderately impact the knowledge management process, while the knowledge holders and knowledge measuring practices weakly support the entire knowledge management process. The organisations also display a culture of practices that strongly support knowledge generation, organisation and assessment and application processes, but are weak in knowledge transfer. The strategies strongly support knowledge generation and knowledge transfer processes, moderately support knowledge organisation and assessment and weakly support knowledge application.

IT, on the other hand, strongly supports knowledge generation, moderately supports knowlege organisation and assessment but weakly supports knowledge application. Training practices are weak in supporting knowledge generation but strong in supporting all the other processes. Performance practices strongly support all processes except knowledge application, where it is seen to be weak. The infrastucture moderately supports all processes except knowledge organisation and assessment, where it is seen to be very weak.

A summary of the influence of knowledge management practices in Malawian NGOs on the knowledge management process is given in Table 5.1 where:

- 3 Represent strong practices where positive influence outweighs negative influence on processes.
- 2 Represents moderate practices where positive influence carries almost the same weight as negative influence on processes.
- 1 Represents weak practices where negative influence outweighs positive influence on processes.

Table 5.1: Influence of knowledge management practices on the knowledge management process

Knowledge management success factor	**Knowledge management process**			
	Generation	Organisation and assessment	Transfer	Application
Awareness of knowledge management	2	2	2	2
Knowledge management culture	3	3	1	3
Knowledge management strategy	3	2	3	1
IT for knowledge management	3	2	2	1
Training and knowledge management	1	3	3	3
Individual performance and knowledge management	3	3	3	1
Knowledge management infrastructure	2	1	2	2
Knowledge management holders	1	1	1	1
Measuring knowledge management	1	1	1	1
Total	**19**	**18**	**18**	**15**

Notably, the results show weak (1) knowledge management holders and measuring of knowledge management at all stages of the knowledge management process. Additionally, the knowledge transfer culture is lacking (1). On a positive note, knowledge management culture, training and individual performance exhibit strong (3) practices in at least three stages of the knowledge management process.

It can be perceived from the analysis that Malawian NGOs pursue activities which are more oriented towards the knowledge generation process (19) than the other three processes. The knowledge organisation, assessment and transfer processes receive equal amounts of support (18), which is slightly lower than that of knowledge generation. The least supported process is the knowledge application process (15), suggesting that NGOs in Malawi are preoccupied with generation and transfer of knowledge without following up on the actual use of the knowledge. This is adverse to the knowledge management initiatives since the value of knowledge is only seen when it is applied (Lee & Lan, 2011:733). Therefore, the NGOs need to equally support the knowledge application process by adopting more practices which support the use and re-use of the acquired knowledge.

Furthermore, unlike the for-profit sector, NGOs need to carefully structure their knowledge generating and sharing activities, bearing in mind the high volunteer turnover rate, as a result avoiding the loss of important tacit and explicit knowledge. The need to formalise and actively support both internal and external communication remains important since their partners have a bearing on the organisational culture. While diffusion of knowledge might not be a big challenge in the for-profit organisations, NGOs have to carefully put in place strategies aimed at ensuring effective diffusion of value-adding knowledge among their often loosely coupled projects.

Further analysis of knowledge management practices by the sectors in which these NGOs focus their work allowed the study to unravel how each of the represented sectors are embracing knowledge management practices. Though the practices are not good enough to be called excellent, NGOs in the civil rights, education and research and health sectors tended to have implemented more knowledge management practices than the other sectors, suggesting that they have more funding to support programmes such as IT systems, enabling them to manage their knowledge assets better.

5.13 Relationships among various knowledge management success factors

A positive relationship was observed among the various knowledge management success factors, suggesting that these factors are interlinked. Accordingly, changing one practice will affect the others.

A very strong correlation observed between knowledge management culture and knowledge management strategy is in conformity with the findings of Safa et al. (2006:83) who also observed a significant correlation between these two factors. Perhaps this can be explained by the assertion that organisational culture influences the knowledge management approach chosen by an organisation (Leidner, Alavi & Kayworth, 2006:38). An equally strong correlation observed between knowledge holders and measuring knowledge management is not surprising, as organisations need to know the knowledge they possess through identification of knowledge holders to be able to measure it.

Knowledge management culture and knowledge holders exhibit generally stronger relationships with other factors than the rest. This can be attributed to the cross-cutting nature of culture and the fact that knowledge holders typically form the knowledge base of an organisation, giving them a key role in the success of knowledge management practices (Cardoso et al., 2012:277). On the other hand, awareness of knowledge management has generally shown weak relationships with other factors, especially performance strategy, training and culture. These findings are surprising, as awareness of knowledge management initiatives has been deemed to motivate implementation of the knowledge management practices such as training, which in turn cultivates and supports the generation and use of knowledge, resulting in better performance (Matzkin, 2008:152; Corfield et al., 2013:186). It is possible that most practices are implicitly embraced, without directly linking them to knowledge management initiatives.

Observing the strong relationships among a majority of the success factors, it can be concluded that the various knowledge management success factors are a body, where each factor has its own function, but when one suffers, all the other parts share its suffering and vice versa. For instance, a knowledge management culture that does not emphasise nurturing, preserving and managing of organisational knowledge is less likely to invest in training. Similarly, an organisation with no clear strategy on the systematic use of knowledge practices is unlikely to be able to measure and evaluate the effects of knowledge management on business results. Thus it is observed that these factors cumulatively contribute towards the betterment of the organisations.

5.14 Chapter summary

The findings of this study lead to the conclusion that, knowledge management capabilities are still insufficiently utilized in Malawian NGOs. There is need for strategic and active generation, organisation and assessment, transfer and application of knowledge to ensure a balanced knowledge management process. It is indisputable that once the knowledge management capabilities are extensively utilised, NGOs could emerge more efficient and effective in delivering their services.The findings of this study conform with previous research (Matzkin, 2008:156; Safa et al., 2006:84;

Lettieri et al., 2004:29), accentuating the need to for NGOs to systematically structure their knowledge management activities while conscious of the factors that enable knowledge to contribute to their performance.

This chapter scrutinised the empirical findings of the research in order to address the primary reseach questions. Chapter 6 will will synthesise the empirical findings to provide a theoretical implication of the findings and offer some recommendations to Malawian NGOs while highlighing limitations of the research and suggesting areas for further research.

CHAPTER 6: CONCLUSION AND RECOMMENDATIONS

Knowledge management is a growing trend that is driving organisations to divergent, innovative and unchartered ways of doing business in constantly-changing and unpredictable economic environments. This necessitated the examination of the quality of knowledge management practices and success factors in Malawian NGOs. The study has sought to determine if Malawian NGOs are fully exploiting the capabilities of their knowledge assets. The general theoretical literature on this subject and specifically in the context of Malawi is inconclusive on several vital questions within the non-profit sector in Malawi.

The study sought to answer three questions:

1. Which knowledge management practices are being implemented by NGOs in Malawi and to what extent?
2. What influence do these practices have on the knowledge management process?
3. What are the relationships among the knowledge management success factors?

The main empirical findings were scrutinised in the discussion chapter. The current chapter will synthesise the empirical findings to firstly answer the study's three questions, secondly provide a theoretical implication of the findings, thirdly offer some recommendations to Malawian NGOs and finally spell out limitations of the research and suggest areas for further research.

6.1 Empirical findings

1. **Which knowledge management practices are being implemented by NGOs in Malawi and to what extent?**

Results from this study suggest that apart from the high individual performance in relation to knowledge management, knowledge management practices in Malawian NGOs are inclined towards a rich knowledge management culture, with strong training initiatives, while the management of knowledge holders and practices to measure the effects of knowledge management are still lacking and where the practices exist, they fall short of being excellent. The organisations have also made some considerable strides in putting in place strategies for knowledge management, although they lack systematic approaches to

the application of knowledge management practices to organisational functions and processes for organisational effectiveness.

It also emerged that Malawian NGOs lack solid technologies and infrastructure for effectively managing knowledge, thus moderate use of these systems was observed. Despite most organisations adopting all these knowledge management practices, the awareness levels of knowledge management issues remain low to medium. The observation persuades one to support the notion that some of the knowledge management practices are implicitly embraced, with no full understanding of their impact on management of knowledge assets (Safa et al., 2006:84; Matzkin, 2008:156).

The extent of practices in Malawian NGOs therefore came out in the following order, with number 1 being the most practiced or developed concept while number 9 is the least practiced or developed concept. The list was generated based on the weighted results in figure 4.1.

1. Performance and knowledge management.
2. Knowledge management culture.
3. Training and knowledge management.
4. Knowledge management strategy.
5. Information technology for knowledge management.
6. Knowledge management infrastructure.
7. Awareness of knowledge management.
8. Knowledge management holders.
9. Measuring knowledge management.

It is evident that knowledge management capabilities are underexploited in Malawian NGOs, given the not so excellent levels at which the practices are implemented. The compelling need to extensively harness knowledge assets in order to match the environmental constraints of Malawian NGOs is pronounced. It is indisputable that once the knowledge assets are fully utilised, they can create value for organisations, which is comparable to the value demanded by their constantly-changing operating environments.

2. **What influence do these practices have on the knowledge management process?**

An analysis of the influence of the knowledge management practices on the knowledge management process revealed an unbalanced pursuit of knowledge management practices oriented towards the knowledge generation process but fall short in knowledge application activities. The knowledge organisation, assessment and transfer processes receive equal amounts of support, which is slightly lower than that of knowledge generation. This proposes that NGOs in Malawi are preoccupied with generation of knowledge without following up on the actual use of the knowledge. This is catastrophic to the knowledge management initiatives since the value of knowledge is only seen when it is applied (Lee & Lan, 2011:733).

If Malawian NGOs are to realise the full benefits of knowledge management initiatives, they need to adopt practices which support the knowledge management process in a balanced way, thus from knowledge generation, organisation and assessment, transfer to its application.

3. **What are the relationships among the knowledge management success factors?**

A correlation analysis of how various knowledge management success factors interact unveiled a positive relationship among them, suggesting that these factors are interlinked. Accordingly, changing one practice will affect the others. The relationships are represented in Table 6.1, in order of strength. The strength of relationships was determined based on strength values in Table 4.15 where Spearman correlations were tested. The strength was described using the scale of .00-.39 “weak”, .40-.59 “moderate” and .60-.1.0 “strong”.

Table 6.1: Relationships among the knowledge management success factors

Success factors		Relationship strength
Knowledge management culture	Knowledge management strategy	Strong
Measuring knowledge management	Knowledge management holders	Strong
Knowledge management culture	Training and knowledge management	Strong
Measuring knowledge management	IT for knowledge management	Strong
Knowledge management culture	Knowledge management holders	Strong
Knowledge management strategy	Knowledge management holders	Strong
Knowledge management culture	Measuring knowledge management	Strong
Knowledge management holders	IT for knowledge management	Strong
IT for knowledge management	Knowledge management strategy	Strong
Training and knowledge management	Knowledge management strategy	Strong
Knowledge management culture	IT for knowledge management	Strong
Measuring knowledge management	Training and knowledge management	Strong
Knowledge management infrastructure	IT for knowledge management	Strong
Measuring knowledge management	Knowledge management infrastructure	Strong
Knowledge management holders	Knowledge management infrastructure	Strong
Knowledge management holders	Training and knowledge management	Strong
Knowledge management culture	Knowledge management infrastructure	Strong
Measuring knowledge management	Knowledge management strategy	Strong
Knowledge management infrastructure	Training and knowledge management	Strong
Knowledge management infrastructure	Knowledge management strategy	Strong
Training and knowledge management	IT for knowledge management	Strong
Performance and knowledge management	Knowledge management holders	Strong
Performance and knowledge management	Training and knowledge management	Strong
Performance and knowledge management	Measuring knowledge management	Moderate
Performance and knowledge management	Knowledge management strategy	Moderate
Performance and knowledge management	Knowledge management culture	Moderate
Knowledge management holders	Awareness of knowledge management	Moderate
Performance and knowledge management	IT for knowledge management	Moderate
Knowledge management infrastructure	Awareness of knowledge management	Moderate
Measuring knowledge management	Awareness of knowledge management	Moderate
IT for knowledge management	Awareness of knowledge management	Moderate
Performance and knowledge management	Knowledge management infrastructure	Moderate
Knowledge management strategy	Awareness of knowledge management	Weak
Knowledge management culture	Awareness of knowledge management	Weak
Training and knowledge management	Awareness of knowledge management	Weak
Performance and knowledge management	Awareness of knowledge management	Weak

Knowledge management culture and knowledge holders exhibit generally stronger relationships with other factors than the rest, giving them a key role in the success of knowledge management practices. Surprisingly, awareness of knowledge management generally exhibits weak relationships with other factors such as individual performance and knowledge management, knowledge management strategy, training and knowledge management and knowledge management culture, depicting that the rest of the practices may have been embraced implicitly with no direct link to knowledge management initiatives.

Clearly a majority of relationships are strong, thus it can be concluded that the various knowledge management success factors are a body, where each factor has its own function but when one suffers, all the other parts share its suffering and vice versa.

6.2 Theoretical implications

Given the growing trends in the social, developmental and humanitarian needs against the shrinking resource base, the future of NGOs largely depends on their ability to effectively manage their intellectual capital. While knowledge management practices certainly improve the performance of organisations, its success hinges on intuitiveness of operational contexts and methodologies of the organisations. It is essential to understand that the magnitude of knowledge management impact on organisational processes depends not only on the practices adopted, but also on the quality of these practices.

NGOs in Malawi should audit the success of their knowledge management initiatives in order to identify lacking areas and improve accordingly. Drawing from the theoretical concepts that knowledge processes can be stimulated or inhibited by particular knowledge management practices (Andreeva & Kianto, 2012:618) and that knowledge management processes have a significant influence on knowledge management performance (Zaim et al., 2007:64; Mills & Smith, 2011:168), this can work as a basis to check if the practices are being undertaken in a balanced way to support the entire knowledge management process and, ultimately, to improve the organisation's performance.

Given that it is crucial to have a clear understanding of how the adopted knowledge management practices influence the knowledge management processes (Andreeva &

Kianto, 2012:618), Malawian NGOs are unlikely to benefit much from knowledge management initiatives unless they embrace a systematic approach and top-level focus on knowledge management practices and processes required for achieving specific business objectives. Investment in appropriate knowledge management practices such as training of employees and promoting a knowledge-sharing culture can improve the knowledge management processes and individual performance and, ultimately, positively impact the performance of an organisation (and vice versa).

Similarly, Malawian NGOs need to embrace knowledge management practices that effectively facilitate the knowledge management process; otherwise they run a risk of having dysfunctional knowledge management processes and inefficient individuals, resulting in poor organisational performance. The ability to harness beneficial knowledge management practices and aligning them with the knowledge management and business processes is essential to bring out the value of knowledge management initiatives in the organisation (Khaksar et al., 2011:1076). This involves the identification and implementation of critical knowledge management practices to build the organisation's knowledge assets.

At the same time, senior management should actively promote practices that affect the success of the knowledge management process by raising the awareness and understanding of staff. With a high level of awareness and understanding, communication and knowledge flow become more frequent and effective. This enhances the business processes of an organisation, thereby improving its performance.

It has emerged that the influences and interactions of knowledge management practices would positively impact the knowledge management process to maximise the opportunities of an organisation, thereby improving its performance. Implementing appropriate practices and linking them to the suited processes would therefore enable organisations to effectively manage their knowledge assets. More importantly, effective knowledge management success factors applicable to specific situations within the organisation would be identified.

The findings of this study provide a basis for internal knowledge management practices and processes to be assessed, giving the organisation a chance to improve where things are

not working as expected. In addition, it gives management the ability to justify the investment in knowledge management activities, and to minimise the risk of focusing on issues that are not aligned to the organisation's objectives. By explicitly specifying the extent to which each practice interacts with and influences specific processes, senior management can make informed decisions about the effectiveness of their investment in knowledge activities.

The findings lay bare the extent to which knowledge management practices are aligned with the knowledge management processes as well as how these processes will influence organisational performance, thus providing a mechanism for NGOs to identify and manage risks related to poor practices. Ultimately, the non-profit sector in Malawi and elsewhere should facilitate the identification of key areas of weak knowledge practices and how these weaknesses can be addressed at a strategic level. An organisation that is successful in managing knowledge is characterised by the ability to align appropriate practices with knowledge management processes in order to positively impact the organisation's performance (Khaksar et al., 2011:1076).

6.3 Recommendations

From the findings, there are a number of key issues relating to the knowledge management practices in Malawian NGOs. These issues can be very useful in generating achievable policy strategies and targets with regard to knowledge management. The summary of recommendations include:

1. NGOs should ensure that senior management are aware of values attached to knowledge management.
2. NGOS need to engage in a combination of knowledge management strategies that recognise the existence challenges while presenting tools to address.
3. NGOs need to focus on strengthening selected cultural values, which favour effective knowledge nanagement processes.
4. NGOs should utilise IT systems that support knowledge management initiatives while ensuring effective use of such systems.
5. Key success indicators for knowledge investment should be properly aligned with business strategies to influence organisational performance.

6. Internal capacity building needs to be supplemented by external trainings and educational programmes for maximum benefit.

First, like the for-profit sector, the non-profit sector is being pressurised by the complexities of evolving working environments, thereby requiring effective knowledge management strategies for them to thrive. It is essential that senior management are aware of the value attached to their knowledge assets and must be willing to invest in managing them. It is therefore crucial to have a dynamic leadership that can drive trends in these organisations.

Secondly, while NGOs embrace the much-needed knowledge initiatives, it is vital for them to be aware of the challenges associated with their structures and working methodologies as they have a significant bearing on the diffusion of knowledge. While there are no silver bullet solutions, NGOs in Malawi should engage in a combination of knowledge management strategies that recognise the existence of these challenges while presenting tools to address them, bearing in mind that no single strategy can provide a comprehensive solution to the problems.

Thirdly, NGOs need to focus on strengthening or promoting selected cultural values, which would favour effective generation, organisation and assessment, transfer and application of both tacit and explicit knowledge, and its application to business processes. At the same time, they need to maintain a balance by being receptive to all contributors such as employees, partners and communities.

Fourth, the value of having in place the right organisational and technological infrastructures to support knowledge management should not be misconstrued. NGOs could benefit from utilising IT systems that support knowledge management initiatives while being fully aware that these systems do not work in isolation. Individuals should still play their role to ensure effective use of such systems.

Fifth, key success indicators for knowledge investment should be properly aligned with business strategies to influence organisational performance. Thus they should be able to evaluate the success of knowledge management initiatives, identifying the associated risk

and taking necessary steps to mitigate the risk. Managing knowledge in ad hoc ways may not produce the desired results.

In addition, internal capacity building needs to be supplemented by external training and educational programmes to allow employees to learn both internally and externally. Similarly, NGOs can derive maximum benefits from coupling formalised ways of doing things with non-formal work practices obtained through direct interactions among people.

Finally, the study identified criteria for assessing the success of knowledge management initiatives, identifying interactions between knowledge management practices and processes and linking them to the organisation's knowledge management performance.

6.4 Limitations and suggestions for future research

A greater depth of data could have been obtained if respondents had been separated into management and ordinary users. This would have helped in validating the responses, especially on measuring performance where issues of attribution may come into play. Respondents may attribute positive events and outcomes to themselves, while attributing negative events and outcomes to external forces. Thus separating the groups and allowing them to independently assess each other may bring more neutralised responses. In addition, respondents may exaggerate events and outcomes bringing a bias to the findings. The limited time available to investigate the research problem made it impossible for this research to seek the opinion of beneficiaries on the services they receive from the NGOs.

Secondly, due to limited literature on the research topic, the research attempted to assess a large number of success factors in Malawian NGOs, hence a general overview of some organisational processes was provided. Thorough investigations into the challenges being faced by NGOs with regards to the progress of each success factor would require additional research. This research could perhaps assume a qualitative nature, and might probe people's concepts about the reasons why some practices are dominant as opposed to others. Had it been possible in the current research to include both a qualitative and a quantitative approach, greater insight may have been gained into the challenges the NGOs in Malawi face in their quest to implement knowledge management initiatives. Qualitative data may also have made it possible to identify some practices unique to the Malawian set up.

Thirdly, exploratory research methods have limitations of only only supplying data, leaving its interpretation to the researcher, resulting in different researchers interpreting the same set of results differently. To mitigate this, a systematic comparison of the research findings with similar previous studies was carried out.

In addition, the closed questions tended to force the participants into particular response categories, thereby limiting them from freely expressing themselves and pointing out specific issues and areas of concern in their organisations. For instance they were only able to rate the quality of knowledge management systems, without neccesarily pointing out their strength and weaknesses. This information would have been helpful to address the particular needs of NGOs, rather than just generalising.

Further research should be directed at investigating the impact of the knowledge management initiatives on beneficiaries, who are the primary focus of NGOs. In addition, researchers need to focus on an in-depth analysis of how each of the knowledge management success factors are progressing in Malawi, and the challenges being faced by these organisations, making suggestions on how Malawian NGOs can overcome the barriers.

6.5 Conclusion

It has been seen that knowledge management practices in Malawian NGOs are inclined towards a rich knowledge management culture, strong training initiatives and planned strategies for knowledge management. However the management of knowledge holders and practices to measure the effects of knowledge management are still lacking. Furthermore, they lack solid technologies and infrastructure to effectively manage knowledge and the awareness levels of knowledge management issues remain low to medium.

It was also found out that these practices are adopted in an unbalanced way, with some process receiving more attention than others. The strong relationships observed amongst a majority of the knowledge management success factors clearly shows that they are interelated and therefore have influence on each other.

While knowledge management may seem fashionable, NGOs in Malawi will not derive any benefits from jumping onto the bandwagon willy-nilly. Rather, they should selectively and objectively embrace the knowledge management aspects that effectively address their actual challenges. The findings of this study imply that although NGOs are knowledge-intensive organisations, they lack clear strategies to systematically manage their intellectually properties. As such, there is need for a paradigm shift in the way NGOs manage their knowledge assets, away from accidental implementation fed by practices that are not linked to organisational objectives, towards a strategic approach involving objectively-implemented practices, which would enable them to effectively adapt and cope with complex environments. Thus NGOs in Malawi need to adopt a more systematic and holistic approach to justify the business value of investment in knowledge.

REFERENCES

1. AJMAL, M. M., HELO, P. & KEKALE, T. 2010. Critical factors for knowledge management in project business. *Journal of knowledge management*, vol. 14, issue 1, pp. 156–168. [Online] Available from: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1608910. (Accessed on 27 January 2015)

2. AKRAM, F. & BOKHARI, R. 2011. The role of knowledge sharing on individual performance, considering the factor of motivation- The conceptual framework. *International journal of multidisciplinary sciences and engineering*, vol. 2, issue 9, pp. 44–48.

3. AKRAM, K., SIDDIQUI, H. S., NAWAZ, M. A., GHAURI, T. A. & CHEEMA, A. K. H. 2011. Role of knowledge management to bring innovation: An integrated approach. *International bulletin of business administration,* issue 11, pp. 121–134. [Online] Available from: http://www.econ-jobs.com/research/9515-Role-of-Knowledge-Management-to-Bring-Innovation-An-Integrated-Approach.pdf. (Accessed on 27 January 2015)

4. ALWIS, R. S. & HARTMANN, E. 2008. The use of tacit knowledge within innovative companies: Knowledge management in innovative enterprise. *Journal of knowledge management*, vol. 12, issue 1, pp. 133–147.

5. ANAND, A. & SINGH, M. D. 2011. Understanding knowledge management: A literature review. *International journal of engineering science and technology*, vol. 3, issue 2, pp. 926–939.

6. ANANTATMULA, V. & KANUNGO, S. 2006. Structuring the underlying relations among the knowledge management outcomes. *Journal of knowledge management*, vol. 10, issue 4, pp. 25–42.

7. ANDREEVA, T. & KIANTO, A. 2012. Does knowledge management really matter? Linking knowledge management practices, competitiveness and economic performance. *Journal of knowledge management*, vol. 16, issue 4, pp. 617–636.

8. BANKS, N. & HULME, D. 2012. The role of NGOs and civil society in development and poverty reduction. *Brooks world poverty institute working paper,* issue 171, pp. 1–39.

9. BHARADWAJ, A. 2000. Integrating positivist and interpretive approaches to information systems research: A Lakatosian model. *Foundations of information systems: Toward a philosophy of information*, vol. 12, issue 9. [Online] Available from: http://www.bauer.uh.edu/parks/fis/Bharadwaj.htm#s2. (Accessed on 27 January 2015).

10. BORGHOFF, U. M. & PARESCHI, R. 1997. Information technology for knowledge management. *Journal of universal computer science*, vol. 3, issue 8, pp. 835–842.

11. CARDOSO, L., MEIRELES, A. & PERALTA, C. F. 2012. Knowledge management and its critical factors in social economy organisations. *Journal of knowledge management*, vol. 16, issue 2, pp. 267–284.

12. CARRILLO, P. M., ROBINSON, H. S., ANUMBA, C. J. & AL-GHASSANI, A. M. 2003. IMPaKT: A framework for linking knowledge management to business performance. *Electronic journal of knowledge management*, vol. 1, issue 1, pp. 1–12.

13. CHANG, T. & CHUANG, S. 2011. Performance implications of knowledge management processes: Examining the roles of infrastructure capability and business strategy. *Expert systems with applications,* vol. 38, pp. 6170–6178.

14. CHEN, T. F. 2010. *Implementing new business models in for-profit and non-profit organisations: Technologies and applications.* New York: IGI global.

15. CHUA, A. & LAM, W. 2005. Why KM projects fail: A multi-case analysis. *Journal of knowledge management*, vol. 9, issue 3, pp. 6–17.

16. CORFIELD, A., PATON, R. & LITTLE, S. 2013. Does knowledge management work in NGOs? *International journal of public administration*, issue 36, pp. 179–188.

17. CRESWELL, J. W. 2009. *Research design: Qualitative, quantitative, and mixed methods approaches.* Los Angeles: Sage.

18. DALKIR, K. 2005. *Knowledge management in theory and practice.* Burlington: Elsevier.

19. DETLOR, B., RUHI, U., TUREL, O., BERGERON, P., WEI CHOO, C., HEATON, L. & PAQUETTE, S. 2006. The effect of knowledge management context on knowledge management practices: An empirical investigation. *The electronic journal of knowledge management,* vol. 4, issue 2, pp. 117–128.

20. DU PLESSIS, M. 2007. The role of knowledge management in innovation. *Journal of knowledge management*, vol. 11, issue 4, pp. 20–29.

21. EASTERBY-SMITH, M. & LYLES, M. A. 2011. *Handbook of organisational learning and knowledge management*, 2nd edition. Chichester: John Wiley & Sons.

22. EDWARDS, M. & HULME, D. 1992. Scaling up NGO impact on development: Learning from experience. *Development in practice,* vol. 2, issue 2, p. 44. [Online] Available from: http://www.rrojasdatabank.info/eade44-63.pdf. (Accessed on 27 January 2015).

23. ELENA, V. V. 2010. Dimensions and perspectives for knowledge management and information. *Journal of knowledge management, economics and information technology, pp*. 1–6. [Online] Available from: http://www.scientificpapers.org/wp-content/files/1126_Dimensions_and_perspectives_for_knowledge_management_and_information.pdf (Accessed on 27 January 2015).

24. EQUITY AND RURAL EMPLOYMENT DIVISION OF FOOD AND AGRICULTURE ORGANISATION OF THE UNITED NATIONS (FAO). 2011. Gender inequalities in rural employment in Malawi: An overview. [Online] Available from: http://www.fao.org/docrep/016/ap092e/ap092e00.pdf. (Accessed on 27 January 2015).

25. EZINGEARD, J. N., LEIGH, S. & CHANDLER-WILDE, R. 2000. Knowledge management at Ernst & Young UK: Getting value through knowledge flows. In: *Proceedings of the 21st international conference on information systems, Brisbane, 10–13 December 2000*. Atlanta: Association for information systems, pp. 807–822.

26. FIDALGO, F. & BORGES GOUVEIA, L. 2012. Employee turnover impact in organisational knowledge management: The Portuguese real estate case. *Journal of knowledge management, economics and information technology*, vol. 2, issue 2, pp. 1–16.

27. FIRESTONE, J. M. & MCELROY, M. W. 2003. The new knowledge management. *Knowledge management*, vol. 6, issue 10, pp. 12–16. [Online] Available from: http://www.kmci.org/media/New_Knowledge_Management.pdf. (Accessed on 27 January 2015).

28. FRICKÉ, M. 2009. The knowledge pyramid: A critique of the DIKW hierarchy. *Journal of information science*, vol. 35, issue 2, pp. 131–142.

29. GAMBLE, P. R. & BLACKWELL, J. 2001. *Knowledge management: A state of the art guide.* London: Kogan Page.

30. GARCIA, A. V. & LARSEN, R. 2012. Global gap analysis of knowledge management systems applied by anti-human trafficking NGOs: Policy analysis exercise, prepared for The United Nations Global Initiative to Fight Human Trafficking. Cambridge: *John F. Kennedy school of government.* [Online] Available from: http://www.ungift.org/doc/knowledgehub/resource-centre/UN.GIFT/GIFT_Harvard_global_gap_analysis.pdf. (Accessed on 27 January 2015).

31. GHOLAMI, M. H., ASLI, M. N., NAZARI-SHIRKOUHI, S. & NORUZY, A. 2013. Investigating the influence of knowledge management practices on organisational performance: An empirical study. *Acta polytechina hungarica*, vol. 10, issue 2, pp. 205–216. [Online] Available from: http://www.uni-obuda.hu/journal/Gholami_Asli_Nazari-Shirkouhi_Noruzy_40.pdf. (Accessed on 27 January 2015).

32. GOLD, A. H., MALHOTRA, A. & SEGARS, A. H. 2001. Knowledge management: An organisational capabilities perspective. *Journal of management information systems*, vol. 18, issue 1, pp. 185–214.

33. GROSSMAN, M. 2006. An overview of knowledge management assessment approaches. *The journal of American academy of business*, vol. 8, issue 2, pp. 242–247.

34. GUCHAIT, P., NAMASIVAYAM , K. & LEI, P. 2011. Knowledge management in service encounters: impact on customers' satisfaction evaluations. *Journal of knowledge management*, vol. 15, issue 3, pp. 513–527.

35. HASSAN, S. & AL-HAKIM, L. A.Y. 2011. The relationships among critical success factors of knowledge management, innovation and organisational performance: A conceptual framework. In*: International proceedings of economics development & research (IPEDR) 2011 International conference on management and artificial intelligence, Bali, 1–3 April 2011.* Bali: International association of computer science and information technology press, vol. 6, pp. 94–103. [Online] Available from: http://www.ipedr.com/vol6/19-A10010.pdf. (Accessed on 27 January 2015).

36. HUME, C., CLARK, P. & HUME, M. 2012. The role of knowledge management in the large nonprofit firm: Building a framework for KM success. *International journal of organisational behavior,* vol. 17, issue 3, pp. 82–104.

37. INTERNATIONAL FUND FOR AGRICULTURAL DEVELOPMENT (IFAD). 2007. Knowledge management strategy. [Online] Available from: http://www.ifad.org/pub/policy/km/e.pdf. (Accessed on 27 January 2015).

38. JASHAPARA, A. 2004. *Knowledge management: An integrated approach*. Essex: Prentice hall.

39. JASIMUDDIN, M. S. 2006. Disciplinary roots of knowledge management: A theoretical review. *International journal of organisational analysis*, vol. 14, issue 2, pp. 171–180.

40. JENNEX, M. E. & OLFMAN, L. 2004. Assessing knowledge management success/effectiveness models. In: *Proceedings of the 37th Hawaii international conference on system sciences, 5 - 8 January 2004.* Innsbruck: IEEE computer society, pp. 1–10.

41. JOHNSON, R. B. & ONWUEGBUZIE, A. J. 2004. Mixed methods research: A research paradigm whose time has come. *Educational researcher*, vol. 33, issue 7, pp. 14–26.

42. KALLING, T. 2003. Knowledge management and the occasional links with performance. *Journal of knowledge management*, vol. 7, issue 3, pp. 67–81.

43. KEENEY, G. 2012. Knowledge management and collaboration effects: South-south NGO collaboration: A case study on the Brazilian interdisciplinary aids association. *Future studies research journal*, vol. 4, issue 1, pp. 159–201.

44. KHAKSAR, S. M. S., YAGHOOBI, N. M., JAHANSHAHI, A. A. & NAWASER, K. 2011. The study of training impact on knowledge management and organisational performance. *Journal of applied sciences research*, vol. 7, issue 7, pp. 1069–1080.

45. KING, K. & MCGRATH, S. 2003. Knowledge sharing in development agencies: Lessons from four cases. Washington: *The World Bank operations evaluation department*. [Online] Available from: http://lnweb90.worldbank.org/oed/oeddoclib.nsf/DocUNIDViewForJavaSearch/2889773BCCFD932D85256DC00055B9DE/$file/development_agencies.pdf. (Accessed on 27 January 2015).

46. KOTHARI, A., HOVANEC, N., HASTIE, R. & SIBBALD, S. 2011. Lessons from the business sector for successful knowledge management in health care: A systematic review. *Biomed central health services research*, vol. 11, issue 173, pp. 1–11. [Online] Available from: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3157420/pdf/1472-6963-11-173.pdf. (Accessed on 27 January 2015)

47. LEE, M. R. & LAN, Y. 2011. Toward a unified knowledge management model for SMEs. *Expert systems with applications*, vol. 38, issue 1, pp. 729–735.

48. LEEDY, P. D. & ORMROD, J. E. 2010. *Practical research: Planning and design*, 9th edition. Upper Saddle River: Pearson education international.

49. LEIDNER, D., ALAVI, M. & KAYWORTH, T. 2006. The role of culture in knowledge management: A case study of two global firms. *International journal of e-collaboration*, vol. 2, issue 1, pp. 17–40.

50. LETTIERI, E., BORGA, F. & SAVOLDELLI, A. 2004. Knowledge management in non-profit organisations. *Journal of knowledge management*, vol. 8, issue 6, pp. 16–30.

51. LEWIS, D. & KANJI, N. 2009. Non-governmental organisations and development. In: BINNS, T. ed. *Routledge perspectives on development.* Abingdon: Routledge.

52. LINDKVIST, L. 2004. Governing project-based firms: Promoting market-like processes within hierarchies. *Journal of management and governance*, vol. 8, issue 1, pp. 3–5. [Online] Available from: http://www.iei.liu.se/pie/teio07/case/1.119672/TetraPakcase.pdf. (Accessed on 27 January 2015).

53. MALHOTRA, R. 2010. Using a meta-modelling knowledge management layer – A new approach to designing the enterprise information architecture. *International journal of data analysis techniques and strategies,* vol. 2, issue 4, pp. 307–335.

54. MARKUS, L. 2001. Toward a theory of knowledge reuse: Types of knowledge reuse situations and factors in reuse success. *Journal of management information systems*, vol. 18, issue 1, pp. 57–93.

55. MATZKIN, D. S. 2008. Knowledge management in the Peruvian non-profit sector. *Journal of knowledge management*, vol. 12, issue 4, pp. 147–159.

56. MILLS, A. & SMITH, T. 2011. Knowledge management and organisational performance: A decomposed view. *Journal of knowledge management*, vol. 15, issue 1, pp. 156–171.

57. MOBALLEGHI, M. & GALYANI MOGHADDAM, G. 2011. Knowledge management and measuring its impact on organisational performance. In: *International proceedings of economics development & research (IPEDR) 2011 International conference on financial management and economics, Hong Kong, 2–3 July 2011*. Singapore: International association of computer science and information technology press, vol.11, pp. 315–319. [Online] Available from: http://www.ipedr.com/vol11/60-W10015.pdf. (Accessed on 27 January 2015).

58. MOSTASHARI, A. 2005. An introduction to non-governmental organisations (NGO) management. *Iranian studies group at MIT*. [Online] Available from: http://web.mit.edu/isg/NGOManagement.pdf. (Accessed on 27 January 2015).

59. OATES, B. J. 2006. *Researching information systems and computing*. London: Sage.

60. OERTEL, S., GEBRE A., KOUROUMA, M. & SAID, T. 2004. Best practices in the participatory approach to delivery of social services. Addis Ababa: *United Nations economic commission for Africa*.

61. OKUMUS, F. 2013. Facilitating knowledge management through information technology in hospitality organisations. *Journal of hospitality and tourism technology*, vol. 4, issue 1, pp. 64–80.

62. PASHA, M. A. & PASHA, S. 2012. Essentials of knowledge management. *Knowledge portal*. [Online] Available from: http://www.innovators.edu.pk/node/192. (Accessed on 27 January 2015).

63. RAHMAN, A. A., IMM NG, S., SAMBASIVAN, M. & WONG, F. 2013. Training and organisational effectiveness: Moderating role of knowledge management process. *European journal of training and development*, vol. 37, issue 5, pp. 472–488.

64. RAJA SUZANA, R. K. 2010. The relationship of knowledge management practices, competencies and the organisational performance of government departments in Malaysia. *International journal of human and social sciences,* vol. 5, issue 4, pp. 219–225.

65. RENSHAW, S. & KRISHNASWAMY, G. 2009. Critiquing the knowledge management strategies of non-profit organisations in Australia. *World academy of science, engineering and technology*, vol. 49, pp. 456–464.

66. RESATSCH, F. & FAISST, U. 2004. Measuring the performance of knowledge management initiatives. Discussion paper presented at *the fifth European conference on organisational knowledge, learning and capabilities, Innsbruck, April 2004*. [Online] Available from: http://www.fim-rc.de/Paperbibliothek/Veroeffentlicht/135/wi-135.pdf. (Accessed on 27 January 2015).

67. ROBINSON, H. S., CARRILLO, P. M., ANUMBA, C. J. & AL-GHASSANI, A. M. 2005. Review and implementation of performance management models in construction engineering organisations. *Construction innovation*, vol. 5, pp. 203–217.

68. ROBLEK, V., ŠTOK, Z. M., MEŠKO, M. & ERENDA, I. 2013. Factors of knowledge management and the impact of employee turnover in activity and performance in scientific and technological parks in Slovenia. *Journal of information and organizational sciences,* vol. 37, issue 1, pp. 63–72.

69. ROGELBERG, S. G. & LUONG, A. 1998. Nonresponse to mailed surveys: A review and guide. *Current directions in psychological science*, vol. 7, issue 2, pp. 60–65.

70. ROWLEY, J. 2007. The wisdom hierarchy: representations of the DIKW hierarchy. *Journal of information science*, vol. 33, issue 2, pp.163–180.

71. SAEED, S., ROHDE, M. & WULF, V. 2008. A framework towards IT appropriation in voluntary organisations. *International journal of knowledge and learning,* vol. 4, issue 5, pp. 438–451. [Online] Available from: http://www.uni-siegen.de/fb5/wirtschaftsinformatik/paper/2008/ijkl.pdf. (Accessed on 27 January 2015).

72. SAFA, M. S., SHAKIR, F. & BOON, O. 2006. Knowledge Management: Practices of NGO in Maldives. *International journal of management and entrepreneurship*, vol. 2, issue 1, pp. 69–86.

73. SAUNDERS, M., LEWIS, P. & THORNHILL, A. 2009. *Research methods for business students*, 5th edition. Edinburgh Gate: Pearson education limited.

74. SCHNEIDER, J. A. 2003. Small, minority-based nonprofits in the information age. *Nonprofit management and leadership*, vol. 13, issue 4, 383–399.

75. SCHWARTZ, D. G. 2006. *Encyclopaedia of knowledge management*. Hershey: Idea Group.

76. SHARRA, S. 2012. Can the internet transform the lives of poor Malawians? *Nyasa times online publication,* 3 June. [Online] Available from: http://www.nyasatimes.com/2012/06/03/can-the-internet-transform-the-lives-of-poor-malawians/. (Accessed on 27 January 2015).

77. SINGH, A. K. & SHARMA, V. 2011. Knowledge management antecedents and its impact on employee satisfaction: A study on Indian telecommunication industries. *The learning organisation,* vol. 18, issue 2, pp. 115–130.

78. SMITH, E. A. 2001. The role of tacit and explicit knowledge in the workplace. *Journal of knowledge management,* vol. 5, issue 4, pp. 311–321.

79. SMITS, M. & MOOR, A. 2004. Measuring knowledge management effectiveness in communities of practice. In: *Proceedings of the 37th Hawaii international conference on system sciences, 5-8 January 2004.* Innsbruck: IEEE computer society, pp. 1–9.

80. THE COUNCIL FOR NON-GOVERNMENTAL ORGANISATIONS IN MALAWI (CONGOMA). 2013. [Online] Available from: http://www.congoma.mw/local-ngos/. (Accessed on 27 January 2015).

81. THE WORLD BANK. 2014. International comparison program summary results release compares the real size of the world economies. [Online] Available from: http://www.worldbank.org/en/news/press-release/2014/04/29/2011-international-comparison-program-results-compare-real-size-world-economies. (Accessed on 27 January 2015).

82. THIERAUF, R. & HOCTOR, J. 2006. *Optimal knowledge management: Wisdom management systems concepts and applications.* Hershey: Idea Group.

83. TSENG, S. 2010. The correlation between organisational culture and knowledge conversion on corporate performance. *Journal of knowledge managemen*t, vol. 14, issue 2, pp. 269–284.

84. TURBIGI, M. 2012. An evaluation of knowledge management processes on organisational performance**.** Paper presented at *Brunel business school – Doctoral symposium, 27–28 March 2012.* [Online] Available from: http://www.brunel.ac.uk/__data/assets/file/0008/184409/phdSimp2012MohammedTurbigi.pdf. (Accessed on 27 January 2015)

85. TURNER, G. & MINONNE, C. 2010. Measuring the effects of knowledge management practices. *Electronic journal of knowledge management,* vol. 8, issue 1, pp. 161–170.

86. VASCONCELOS, J., SEIXAS, P., CHRIS, K. & LEMOS, P. 2006. Knowledge management in non-governmental organisations: A partnership for the future. In: CHEN, C. S., FILIPE, J., SERUCA, I. & CORDEIRO, J. eds. Enterprise Information Systems VII. *Proceedings of the 7th international conference on enterprise information systems, Miami, 24-28 May 2005.* Dodrecht: Enterprise Information Systems VII*,* vol. 7, pp. 121–130.

87. VIDOVIĆ, M. 2010. The link between the quality of knowledge management and financial performance – The case of Croatia. *EFZG working papers series*, *faculty of economics and business, University of Zagreb,* vol. 10, issue 3, pp. 1–15. [Online] Available from: http://web.efzg.hr/RePEc/pdf/Clanak%2010-03.pdf. (Accessed on 27 January 2015).

88. WERKER, E. & AHMED F. Z. 2008. What do nongovernmental organisations do? *Journal of economic perspectives,* vol. 22, issue 2, pp. 73–92.

89. WILLIAMS, R. 2006. Narratives of knowledge and intelligence . . . Beyond the tacit and explicit. *Journal of knowledge management*, vol. 10, issue 4, pp. 81–99.

90. YANG, D. 2011. The effect of knowledge management on product innovation - Evidence from the Chinese software outsourcing vendors. *iBusiness*, issue 3, pp. 16–22.

91. YEH, Y. J., LAI, S. Q. & HO, C. T. 2006. Knowledge management enablers: A case study. *Industrial management & data systems*, vol. 106, issue 6, pp. 793–810.

92. ZACK, M., MCKEEN, J. & SINGH, S. 2009. Knowledge management and organisational performance: An exploratory analysis. *Journal of knowledge management*, vol. 13, issue 6, pp. 39–409.

93. ZAIED, A. N. H., HUSSEIN, G. S. & HASSAN, M. M. 2012. The role of knowledge management in enhancing organisational performance. *International journal of information engineering and electronic business*, issue 5, pp. 27–35. [Online] Available from: http://www.mecs-press.org/ijieeb/ijieeb-v4-n5/IJIEEB-V4-N5-4.pdf. (Accessed on 27 January 2015).

94. ZAIM, H., TATOGLU, E. & ZAIM, S. 2007. Performance of knowledge management practices: A causal analysis. *Journal of knowledge management*, vol. 11, issue 6, pp. 54–67.

95. ZINS, C. 2007. Conceptual approaches for defining data, information, and knowledge. *Journal of the American society for information science and technology*, vol. 58, issue 4, pp. 479–493. [Online] Available from: http://www.success.co.il/is/zins_definitions_dik.pdf. (Accessed on 27 January 2015).

96. ZORN, T. E., FLANAGIN, A. J. & SHOHAM, M. D. 2010. Institutional and non-institutional influences on information and communication technology adoption and use among nonprofit organisations. *Human communication research*, vol. 37, issue 1, pp. 1–33.

APPENDIX I: QUESTIONNAIRE

THE QUALITY OF KNOWLEDGE MANAGEMENT PRACTICES AND SUCCESS FACTORS IN MALAWIAN NON-GOVERNMENTAL ORGANISATIONS

Before you complete the questionnaire, you would have been asked to complete a form that explains to you how informed consent is to be achieved in this study. In an effort to investigate the quality of knowledge management practices and success factors in Malawian NGOs, your friendly cooperation is requested in response to these questions.

PLEASE NOTE:

- As a respondent, you may withdraw your participation at any time, should you wish.
- There are no "wrong" or "right" answers to any of the questions – answers to questions should reflect YOUR opinion.
- Responses will be used only for the purposes of this enquiry – it will in no way be used to assess you, your organisation or your beneficiaries.
- All information will be treated as strictly confidential.

INDICATIONS:

Please supply the answers and/or further information, where required, to the following questions:

Section A – Demographic attributes (*Please tick the applicable*)

1.	**Gender**	
	Female	1
	Male	2

2.	**Level of Education**	
	MSCE	1
	Diploma	2
	Undergraduate degree	3
	Postgraduate degree	4
	Other (please specify):	5

3.	**Age**	
	Below 25 Years	1
	26–30 Years	2
	31–39 Years	3
	40–49 Years	4
	Older than 50 years	5

4.	**Years of experience in the organisation**	
	Less than 3 years	1
	3–5 Years	2
	6–8 Years	3
	More than 8 years	4

8.	**Department**	
	Laboratory	1
	Family Planning	2
	Counselling	3
	Administration	4
	Finance	5
	Program	6
	Health Education	7
	Maintenance	8
	Management Information Systems	9
	Human Resources	10
	Other (please specify):	11

9.	**Main focus area of your organisation**	
	Arts, Culture and Humanities	1
	Education and Research	2
	Environment and Animals	3
	Health	4
	Human Rights	5
	Religion	6
	Civil Rights	7
	Other (please specify):	8

5.	**Name of your organisation:**

6.	**Objectives of your organisation:**

7.	**Targeted beneficiaries and their location:**

Section B – Organisational components of knowledge management practices *(Please tick the applicable)*

Awareness of Knowledge Management

10.	Knowledge management practices are a responsibility of the managers and executives.	Strongly agree	Agree	Disagree	Strongly disagree
11.	Knowledge is applied to improve and innovate.	Always	Sometimes	Rarely	Never
12.	I consider email and Intranet to work as knowledge transfer and storing places.	Strongly agree	Agree	Disagree	Strongly disagree
13.	I am familiar with the concept of knowledge management.	Strongly agree	Agree	Disagree	Strongly disagree
14.	What definition would you give for knowledge management?				

Knowledge Management Culture

15.	Recording and sharing knowledge is a routine like any other daily work for employees.	Strongly agree	Agree	Disagree	Strongly disagree
16.	Employees are co-operative and helpful when asked for information or advice by colleagues.	Strongly agree	Agree	Disagree	Strongly disagree
17.	Knowledge sharing is seen as a strength in our organisation.	Strongly agree	Agree	Disagree	Strongly disagree
18.	There is good communication and sharing of knowledge among employees.	Strongly agree	Agree	Disagree	Strongly disagree
19.	Knowledge sharing behaviour, like sharing and re-using, is actively promoted by top level management.	Strongly agree	Agree	Disagree	Strongly disagree
20.	Individuals are visibly rewarded for sharing knowledge.	Strongly agree	Agree	Disagree	Strongly disagree
21.	Employees are stimulated to acquire or generate new knowledge.	Strongly agree	Agree	Disagree	Strongly disagree
22.	In our organisation, colleagues learn from each other.	Strongly agree	Agree	Disagree	Strongly disagree
23.	Management encourages employees to capture experiences and lessons learnt.	Strongly agree	Agree	Disagree	Strongly disagree
24.	Management motivates staff to share knowledge by: • building trust	Strongly agree	Agree	Disagree	Strongly disagree
25.	• giving incentives	Strongly agree	Agree	Disagree	Strongly disagree
26.	• making available time and resources for such.	Strongly agree	Agree	Disagree	Strongly disagree
27.	Our organisation has a specific place intended for informal socialisation of employees during working hours.	Strongly agree	Agree	Disagree	Strongly disagree

28.	How would you rate the level to which your organisation: • Has open communication among employees?	Strongly agree	Agree	Disagree	Strongly v
29.	• Nurtures trust among employees?	Strongly agree	Agree	Disagree	Strongly disagree
30.	• Is innovative?	Strongly agree	Agree	Disagree	Strongly disagree
31.	• Has employees that share knowledge?	Always	Sometimes	Rarely	Never
32.	• Has employees that admit their lack of knowledge?	Always	Sometimes	Rarely	Never
33.	• Has employees that initiate generation of new knowledge?	Always	Sometimes	Rarely	Never
34.	• Has employees that consult their colleagues?	Always	Sometimes	Rarely	Never
35.	• Has employees that dedicate their time to converse with colleagues?	Always	Sometimes	Rarely	Never

Knowledge Management Strategy

36.	Top management recognises knowledge management as an important part of organisational strategy.	Strongly agree	Agree	Disagree	Strongly disagree
37.	Our organisation has a clear vision for storing knowledge assets.	Strongly agree	Agree	Disagree	Strongly disagree
38.	There is a clear strategy of how knowledge management is to be used in daily office undertakings.	Strongly agree	Agree	Disagree	Strongly disagree
39.	The organisation hones (sharpens) its skills for acquiring, generating and applying knowledge.	Always	Sometimes	Rarely	Never
40.	Knowledge sharing across departments is actively encouraged.	Strongly agree	Agree	Disagree	Strongly disagree
41.	Everyone in our organisation will respond with the same answer if asked about the organisation's expertise.	Strongly agree	Agree	Disagree	Strongly disagree
42.	The organisation has a clear strategy for knowledge development through research and acquisition (e.g. recruitment).	Strongly agree	Agree	Disagree	Strongly disagree
43.	The organisation has a systematic approach to make use of knowledge in daily work.	Strongly agree	Agree	Disagree	Strongly disagree

Information Technology for Managing Knowledge

44.	Our organisation uses technology to enhance service.	Sometimes	Rarely	Never	Sometimes
45.	Our organisation has systems that make the use of available knowledge easier.	Strongly agree	Agree	Disagree	Strongly disagree
46.	Does your organisation experience problems of efforts being duplicated?	Always	Sometimes	Rarely	Never
47.	How easy is it to find required and correct information in a day-to-day environment?	Very easy	Easy	Difficult	Very difficult
48.	Accomplished tasks are documented well.	Always	Sometimes	Rarely	Never
49.	In our organisation there is awareness of	Strongly agree	Agree	Disagree	Strongly disagree

	appropriate knowledge storage systems.				
50.	Our organisation has the right systems to capture and share new ideas and experiences.	Strongly agree	Agree	Disagree	Strongly disagree
51.	Our organisation has systems where employees can easily find the knowledge they need.	Strongly agree	Agree	Disagree	Strongly disagree
52.	Our organisation has software for knowledge management.	Strongly agree	Agree	Disagree	Strongly disagree
53.	Our organisation has software specifically intended for: • communicating information within the organisation.	Strongly agree	Agree	Disagree	Strongly disagree
54.	• document management.	Strongly agree	Agree	Disagree	Strongly disagree
55.	• managing expert knowledge.	Strongly agree	Agree	Disagree	Strongly disagree
56.	Our organisation has yellow pages for employees.	Strongly agree	Agree	Disagree	Strongly disagree
57.	What is the percentage of employees included in yellow pages?	75%–100%	50%–74%	25%–49%	0%–24%
58.	What is the percentage of employees that should be included in yellow pages?	75%–100%	50%–74%	25%–49%	0%–24%
59.	How do you rate the quality of updating information in the software for document management?	Very good	Good	Poor	Very poor
60.	What is the percentage of employees that have access to internet and electronic mail?	75%–100%	50%–74%	25%–49%	0%–24%

Training and Knowledge Management

61.	Individuals in our organisation are committed to continued improvement.	Strongly agree	Agree	Disagree	Strongly disagree
62.	There is a constant flow/generation of new ideas in our organisation.	Strongly agree	Agree	Disagree	Strongly disagree
63.	There are capacity-building programmes in our organisation.	Strongly agree	Agree	Disagree	Strongly disagree
64.	Our organisation provides training related to knowledge management practices.	Strongly agree	Agree	Disagree	Strongly disagree
65.	Our organisation encourages employees to continue their education by providing funding.	Strongly agree	Agree	Disagree	Strongly disagree
66.	Our organisation encourages experienced workers to transfer their knowledge to new or less experienced workers.	Strongly agree	Agree	Disagree	Strongly disagree
67.	Employees share knowledge by preparing written documents, such as training manuals and daily procedures.	Strongly agree	Agree	Disagree	Strongly disagree

Performance and Knowledge Management

68.	I often ask myself which knowledge I need to perform my current tasks.	Strongly agree	Agree	Disagree	Strongly disagree
69.	I effectively develop new knowledge.	Strongly agree	Agree	Disagree	Strongly disagree
70.	I like to make my contribution to the	Strongly agree	Agree	Disagree	Strongly disagree

	corporate knowledge base.				
71.	I like to share my ideas and experiences with others.	Strongly agree	Agree	Disagree	Strongly disagree
72.	By sharing my knowledge I have made a significant contribution to my organisation.	Strongly agree	Agree	Disagree	Strongly disagree
73.	I am flexible in applying other people's knowledge in order to become more efficient and effective.	Strongly agree	Agree	Disagree	Strongly disagree
74.	I prefer to use other people's ideas and suggestions, instead of figuring it out myself.	Strongly agree	Agree	Disagree	Strongly disagree

Knowledge Management Infrastructure

75.	Our organisation has a key knowledge list.	Strongly agree	Agree	Disagree	Strongly disagree
76.	Our organisation identifies the discrepancy between required and available knowledge.	Strongly agree	Agree	Disagree	Strongly disagree
77.	What is the percentage of employees who are additionally educated?	75%–100%	50%–74%	25%–49%	0%–24%
78.	How would you rate the quality of the programme for additional education of employees?	Very good	Good	Poor	Very poor
79.	What percentage of additionally educated employees left the organisation within the past 12 months?	75%–100%	50%–74%	25%–49%	0%–24%
80.	What is the percentage of employees engaged in knowledge management activities?	75%–100%	50%–74%	25%–49%	0%–24%
81.	How do you rate the quality of selection processes for new employees?	Very good	Good	Poor	Very poor
82.	How do you rate the quality of your organisation’s library?	Very good	Good	Poor	Very poor
83.	There exists an obligation for employees to formally share information and knowledge gained at conferences, workshops, etc.	Always	Sometimes	Rarely	Never
84.	Our organisation has a practice of identifying lessons learnt after completion of a project.	Always	Sometimes	Rarely	Never
85.	How do you rate the quality of the practice of identifying lessons learnt after completion of a project?	Very good	Good	Poor	Very poor

Knowledge Management Holders

86.	Our organisation has a mission statement that includes knowledge.	Strongly agree	Agree	Disagree	Strongly disagree
87.	Our organisation has an employee responsible for managing knowledge.	Always	Sometimes	Rarely	Never
88.	The organisational position of the employee responsible for managing knowledge is appropriate.	Strongly agree	Agree	Disagree	Strongly disagree

89.	The employee responsible for managing knowledge is positioned in the appropriate department.	Strongly agree	Agree	Disagree	Strongly disagree
90.	The employee responsible for managing knowledge holds an appropriate organisational title.	Strongly agree	Agree	Disagree	Strongly disagree
91.	This employee's performance appraisal is appropriate with regards to involvement in knowledge management activities.	Strongly agree	Agree	Disagree	Strongly disagree
92.	What percentage of employees have knowledge management activities included as part of their performance appraisal?	75%–100%	50%–74%	25%–49%	0%–24%
93.	How do you rate the quality of rewarding employees for their contribution to knowledge management?	Very good	Good	Poor	Very poor
94.	Our organisation has a mentorship programme.	Always	Sometimes	Rarely	Never
95.	What is the percentage of employees who participate in the mentorship programme?	75%–100%	50%–74%	25%–49%	0%–24%

Measuring Knowledge Management

96.	Our organisation has performance indicators that are connected to knowledge management.	Strongly agree	Agree	Disagree	Strongly disagree
97.	What is the percentage of organisational performance indicators connected to knowledge management?	75%–100%	50%–74%	25%–49%	0%–24%
98.	How do you rate the quality of indicators of organisational performance connected to knowledge management that are used?	Very good	Good	Poor	Very poor
99.	Our organisation has a practice of keeping track of stories and anecdotes confirming the importance of knowledge management.	Always	Sometimes	Rarely	Never

Thank you for your feedback. We sincerely appreciate your honest opinion.

Completed forms should be returned to enniester@gmail.com or Box 303220, Lilongwe by **30 April 2014**.

APPENDIX II: INFORMED CONSENT FORM

INFORMED CONSENT FORM

A research project of the University of South Africa

Project title:
The quality of knowledge management practices and success factors in Malawian non-governmental organisations (NGOs)

Dear Colleague

The use of this informed consent form is aimed at protecting your autonomy as a participant if you should decide to take part in this research study.

The nature and purpose/s of the research:
As part of a research project for the University of South Africa, we are to undertake the task of gathering data in order to investigate the quality of knowledge management practices and success factors in Malawian NGOs.

The identity and institutional association of the researcher and supervisor and their contact details:
If you have concerns or questions about this study, such as scientific issues or how to do any part of it, please contact:

Ennie Makota
Box 303220
Lilongwe
Malawi
enniester@gmail.com
+265 999 735623

Prof. Leila Goosen
School of Computing
Private Bag X6
Florida, 1710
South Africa
GooseL@UNISA.ac.za
+27 11 670 9112

Please be assured with regard to the following:

- The fact that your participation is voluntary.
- That your responses will be treated in a confidential manner.
- There are not any limits on confidentiality which apply to this research study.
- That your anonymity will be ensured where appropriate, e.g. by using coded/disguised names of respondents and their institutions.
- The fact that as a participant, you are free to withdraw your participation from the research at any time, should you wish, without any negative or undesirable consequences to yourself.

The nature and limits of any benefits participants may receive as a result of their participation in the research:

Please note that as a participant, you will not receive any significant benefits as a result of your participation in this study. However, we do hope that the combined results of the study will produce benefits to the organisations involved, as well as like organisations.

Your signature below means that you agree to participate in this research study.

Signature: _____ Date: _____

APPENDIX III: ETHICAL CLEARANCE

Ennie Makota (43549616)
School of Computing
UNISA
Pretoria

2013-12-19

Permission to conduct research project

Ref: 097/EM/2013

The request for ethical approval for your MSc in Computing research project entitled "The relationship between quality of knowledge management practices and the performance of NGOs in Malawi" refers.

The College of Science, Engineering and Technology's (CSET) Research and Ethics Committee (CREC) has considered the relevant parts of the studies relating to the abovementioned research project and research methodology and is pleased to inform you that ethical clearance is granted for your study as set out in your proposal and application for ethical clearance.

Therefore, involved parties may also consider ethics approval as granted. However, the permission granted must not be misconstrued as constituting an instruction from the CSET Executive or the CSET CREC that sampled interviewees (if applicable) are compelled to take part in the research project. All interviewees retain their individual right to decide whether to participate or not.

We trust that the research will be undertaken in a manner that is respectful of the rights and integrity of those who volunteer to participate, as stipulated in the UNISA Research Ethics policy. The policy can be found at the following URL:
http://cm.unisa.ac.za/contents/departments/res_policies/docs/ResearchEthicsPolicy_apprvCounc_21Sept07.pdf

Please note that if you subsequently do a follow-up study that requires the use of a different research instrument, you will have to submit an addendum to this application, explaining the purpose of the follow-up study and attach the new instrument along with a comprehensive information document and consent form.

Yours sincerely

Chair: School of Computing Ethics Sub-Committee

University of South Africa
College of Science, Engineering and Technology
Preller Street, Muckleneuk Ridge, City of Tshwane
PO Box 392 UNISA 0003 South Africa
Telephone + 27 12 429 6122 Facsimile + 27 12 429 6848
www.unisa.ac.za/cset